

**ENVIRONMENTAL ASSESSMENT  
FOR THE CONSTRUCTION OF THE  
UNITED STATES AIR FORCE TECHNICAL  
APPLICATIONS CENTER (AFTAC)  
ON  
PATRICK AIR FORCE BASE, FLORIDA**



**DECEMBER 2009**

Report Documentation Page				Form Approved OMB No. 0704-0188	
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1. REPORT DATE <b>DEC 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>Environmental Assessment for the Construction of the United States Air Force Technical Application Center (AFTAC) on Patrick Air Force Base, Florida</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>45 Civil Engineer Squadron (45 CES/CEVP),1224 Jupiter Street,Patrick AFB,FL,32925</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT <b>Same as Report (SAR)</b>	18. NUMBER OF PAGES <b>79</b>	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			

## **FINDING OF NO SIGNIFICANT IMPACT**

### **Construction of the United States Air Force Technical Application Center (AFTAC) on**

#### **Patrick Air Force Base, Florida**

**December 2009**

Pursuant to the Council on Environmental Quality regulations, the provisions of the National Environmental Policy Act of 1969 [40 Code of Federal Regulations (CFR) Parts 1500-1508], and *Environmental Impact Analysis Process* (32 CFR Part 989), the United States (U.S.) Air Force (AF) conducted an assessment of the potential environmental consequences of the Proposed Action to beddown the U.S. Air Force Technical Application Center (AFTAC) and construct a new facility that is adequately sized, configured, and appropriately located at Patrick Air Force Base (PAFB) that will meet Force Protection requirements, be able to endure low Category 4 storms and surge, support an increase in personnel, and sustain the AFTAC mission in nuclear event detection and verification technology, hereby incorporated by reference. To meet the long-term mission needs, AFTAC needs replacement administrative space for the current AFTAC facility (Facility 989) at PAFB, which is over 50 years old. Under the Proposed Action, Facility 989 is slated for partial demolition, in addition to demolition of Facilities 982 and 984 located directly west of Facility 989. The current building poses excessive safety, health, and mechanical deficiencies, as well as anti-terrorism/force protection issues. In addition to the administrative facility, AFTAC requires a laboratory to replace one which was closed due to the Base Realignment Closure Act of 1995. This new laboratory will ensure a robust laboratory system is available to meet national security requirements and will allow conversion of a smaller and limited laboratory at Cape Canaveral Air Force Station (CCAFS) into a secondary testing site.

Several alternatives at PAFB were considered including the Proposed Action and the No Action Alternative. An alternative construction site in Central Housing was considered that included the demolition of approximately 129 excess units by the housing privatization company. Another alternative included the utilization of three existing facilities with moderate size areas that could potentially accommodate AFTAC personnel. Finally, the alternative of accomplishing major renovations to Facility 989 was considered. The No Action Alternative would maintain Facility 989 status quo with repairs on an "as needed" basis. The No Action Alternative will not provide sufficient space allocation and the substantial necessary upgrades are essentially cost-prohibitive for such an outdated facility. In addition, with the No Action Alternative, there are significant foreseeable mission impacts if the new primary AFTAC laboratory is not constructed because of the high risk of single point of failure due to security incidents or natural disasters, like wildfires, that have caused issues in the past at the smaller laboratory at CCAFS. For the reasons above, the No Action Alternative is not preferred. The Proposed Action, the preferred alternative, is to construct facilities to provide adequate, consolidated space and modern infrastructure to perform the AFTAC mission in an available location north of Hangars 985 and 986 on PAFB.

### **Environmental Consequences**

No significant environmental impacts were identified that would require the completion of an Environmental Impact Statement. However, some minor impacts were identified.

*Air Quality:* Proposed project activities would be expected to produce short-term, intermittent air quality impacts from fugitive emissions (particulate matter) and other common air pollutants (nitrogen oxides, carbon monoxide, and sulfur dioxide) during construction activities from project equipment and vehicles. A conformity determination under the Clean Air Act is not required because PAFB is located in an area of attainment for the National Ambient Air Quality Standards.

Dust suppression techniques would be used as necessary to mitigate airborne emissions and wind erosion. Cumulative emissions from the diesel powered backup generators will be generated; however, this power source will be used only when severe circumstances cut the main power such as with hurricanes/storms.

*Biological Resources:* No Federal-listed Threatened and Endangered (T&E) plant species have been identified at PAFB. Protected T&E sea turtles are found on the beaches and Atlantic Ocean waters east of the facility siting. The facility will be designed to be compliant with the 45th Space Wing Instruction (SWI) 32-7001, *Exterior Lighting Management*, to reduce artificial lighting impacts that cause sea turtle nesting/hatching misorientation and disorientation. The AF will provide a light management plan to the U.S. Fish and Wildlife Service (USFWS) for review and concurrence per requirements outlined in consultation under Section 7 of the Endangered Species Act. The removal of native vegetation would be limited as the Proposed Action area is located in previously disturbed non-native habitat (e.g., grassy areas and manmade berms).

*Floodplains and Wetlands:* The Proposed Action area is neither located within the 100-year floodplain nor wetlands.

*Cultural Resources:* A reconnaissance study conducted by the National Park Service in 1982 found that no significant cultural resources would be anticipated to be located at the Proposed Action area because the property in the Proposed Action area was either subject to extensive earth moving or was developed. Facilities 982, 984, and 989 have been determined to be ineligible for listing as Cold War assets on the National Register of Historic Places. No impacts are anticipated.

*Geology and Soils:* Land disturbance activities have the potential to accelerate erosion. Erosion and sediment control measures would be designed and implemented to retain sediment on-site and prevent violations of State and Federal water quality standards. Any erosion or shoaling that could cause adverse impacts to water resources would be minimized using Best Management Practices such as silt fencing. The demolition of Facility 989 would require coordination with the Installation Restoration Program (IRP) to address contamination sites near 989 that are documented or under investigation. No significant impacts are anticipated.

*Hazardous Materials and Wastes:* Hazardous materials and waste that may be encountered during demolition activities include fluorescent lamps, high intensity discharge lamps, refrigerants, polychlorinated biphenyls, batteries, and mercury thermostats and switches. All of these materials would be removed prior to demolition and properly disposed or recycled in coordination with the AF.

Asbestos Containing Materials (ACM) surveys for Facilities 982, 984 and 989 indicate various floor tile/mastic, base molding/mastic, and carpet mastic contain ACM. If other materials are suspect, testing will occur for disposal characterization. A pre-demolition ACM survey will be completed and ACM will be abated before demolition. Project designs for demolition of all facilities constructed prior to 1981 will fully address the National Emission Standards for

Hazardous Air Pollutants (NESHAP) requirements for asbestos (40 CFR 61 Subpart M). All ACM will be disposed of in the 45th Space Wing (45 SW) CCAFS landfill.

Due to the age of Facilities 982, 984 and 989, heavy metal paints may be present as coatings and will be tested for disposal characterization. Activities involving painting and/or paint removal will be performed in accordance with the Florida Department of Environmental Protection (FDEP), the United States Environmental Protection Agency (EPA), the Occupational Safety and Health Administration (OSHA), and the Housing and Urban Development (HUD) requirements for heavy metal and particulate matter emissions and heavy metal paint debris disposal. Materials/coatings containing heavy metals should be left in place if possible and not disturbed. Large sized pieces of Construction and Demolition debris with intact heavy metal paints shall be stored in covered containers until ready for disposal in a Class I or III landfill or a C&D disposal facility. The contractor will be responsible for sampling other generated waste stream (rinse water, chips, etc.) to determine if they are hazardous. Results of laboratory analyses will be made available to the AF.

Solid waste issues related to the debris generated from demolition activities would impact local landfills. However, all materials, equipment, and metals identified as potentially salvageable would be staged for possible recycling or reuse during demolition activities. The purchase of construction materials containing recycled materials would also be maximized. Solid waste that is recycled during demolition activities would result in a positive environmental impact by landfill use avoidance and conservation of virgin materials.

All appropriate storage and handling procedures will be followed in the laboratory in accordance with 29 CFR 1910.1450, *Occupational Safety and Health Standards—Occupational Exposure to Hazardous Chemicals in the Laboratory*, and 29 CFR 1910.1200, *Hazard Communication*. All chemicals and other hazardous materials will be stored properly to prevent spills, uncontrolled reactions and to minimize worker exposure. All hazardous materials containers will be properly labeled and inventoried, and Material Safety Data Sheets available. Radioactive materials will require additional security controls such as locked storage, documented inventory, and locking laboratories when not occupied.

Hazardous waste will be properly labeled, separated by hazard class and stored for disposal. All hazardous waste containers designated for liquid storage will have appropriate secondary containment to prevent an uncontrolled release in the event of a breakage.

Regulated fuel storage tanks will be constructed IAW Florida Administrative Code (FAC) 62-761 and will be inspected and approved by the Florida Department of Environmental Protection (FDEP) before filling with fuel. Records on contents, either loaded into each tank or dispensed from each tank, will be kept by the Fuels Management and Bulk Storage Operations group in accordance with AFI 23-201 and AFI 23-110. This information, required for all tanks (including fuel, chemical storage, hazardous waste storage, and pressurized), is a requisite for calculating total air emissions from Air Force storage tanks (i.e., “through put” and “loading or unloading” emissions).

**Health and Safety:** Various health and safety hazards associated with heavy equipment operation and conventional demolition would exist. All appropriate regulations would be followed during project activities, along with AF and 45 SW-specific guidance. Specific safety precautions would be implemented in the design of the new AFTAC facility to meet the minimum requirements of the DoD Minimum Antiterrorism Standards. In addition, laboratory processes anticipated to occur in the new facility will be evaluated for safety and occupational health

compliance; likewise, chemical use and waste will be characterized for handling and disposal requirements.

Health and safety hazards in the laboratory would be minimized through appropriate engineering controls, personal protective equipment, and administrative procedures. All personnel would be properly trained in accordance with regulatory requirements. A Laboratory Chemical Hygiene Plan would be developed to identify hazards and describe procedures for emergencies, special hazards, and handling hazardous materials. No significant impacts are anticipated.

*Infrastructure and Transportation:* Existing roads on PAFB would allow access to the new AFTAC facility, and only a small perimeter road would be constructed. The AF will obtain permits that may be required such as stormwater management, utility improvements and connections, etc. Waste streams that require vehicular transportation will be coordinated with the Florida Department of Transportation (FDOT), if required, and will be staggered to prevent local traffic issues. All lighting would be compliant with the 45 SW Instruction 32-7001, *Exterior Lighting Management*. No significant impacts are anticipated.

*Land Use and Zoning:* Federal consistency is a Coastal Zone Management Act requirement in which federal activities, including development, that may have a reasonable foreseeable effect on coastal resources will be consistent with the state federally approved Coastal Management Program (15 CFR Part 930, Subpart C). The Proposed Action has been deemed consistent with the Florida Coastal Management Program. The Air Force will ensure that the Action continues to be consistent to the maximum extent practicable. The Proposed Action site is also in line with the PAFB Comprehensive/General Plan.

*Noise:* Demolition and construction activities would generate noise, which although not continuous, could be disruptive for extended periods to wildlife and individuals in the immediate area. When employees are subjected to excessive noise, feasible administrative or engineering controls would be utilized such as temporary relocation to other facilities. If such controls do not reduce sound to acceptable levels, hearing protection would be provided and used to reduce noise impacts for those in the immediate area.

*Socioeconomics:* Socioeconomics comprise such interrelated resources as population, employment, income, temporary living quarters (during construction activities), and public finance. This beddown action will result in an increased base population (and the surrounding area) with a projected increase of 100-150 new employees in a five-year span. This increase over several years is not likely to cause any significant changes to the economics of the base or the local community because of the large influx of new residents to the area presently occurring and projected in the future. No significant impacts would be anticipated.

*Water Quality:* An existing open drainage ditch runs parallel to the proposed AFTAC construction site near the airfield, however, it will not be impacted by the Proposed Action. Best Management Practices such as silt curtains/booms would be required to prevent water quality issues downstream. Stormwater management will require pre-treatment by use of dry retention to prevent direct releases to surface waters.

### **Cumulative Impacts**

Cumulative impacts were considered for the Proposed Action and the No Action Alternative. Cumulative contributions of non-recyclable construction debris to the Brevard County and 45 SW CCAFS landfills would occur. The LEED principles used in the design should reduce the

carbon footprint of this large facility; however, there may still be greater cumulative energy consumption because of the 24-hour use of the facility. Because construction designs will be developed with foresight and coordinated with all appropriate external and internal agencies, no significant cumulative impacts should occur.

#### **Alternatives Considered Including the No Action Alternative**

Under the No Action Alternative, use of the existing facility (989) with "as needed" repairs was not a viable alternative because the site is unable to achieve Antiterrorism/Force Protection compliance, cannot accommodate the anticipated increase in personnel, and has become a large maintenance burden.

#### **Conclusion**

The Draft EA and FONSI were made available to the affected public for a 30-day public comment period with notification by advertisement placed in a locally reviewed newspaper. The EA and FONSI were made available by placing them on file in the local public library, Satellite Beach, and 45 SW Public Affairs Office, PAFB, FL.

The Draft EA and FONSI were sent to FDEP's State Clearinghouse which provided interagency review. The FDEP determined that the Proposed Action is consistent with the Florida Coastal Management Program's policies and objectives, and continued concurrence will be addressed in permitting reviews. The USFWS concurred that the Proposed Action is not likely to adversely affect Federally listed species provided they approve the light management plan for the new facility area.

#### **Finding of No Significant Impact**

In accordance with the Council on Environmental Quality Regulations implementing the National Environmental Policy Act of 1969 (Public Law 91-190, 42 U.S.C. §§4321-4347), as amended, and 32 CFR 989, 15 Jul 1999, and amended 28 Mar 2001, an assessment of the identified environmental effects has been prepared for construction of an AFTAC facility and the associated demolition of Facility 989 "B" and "C" wings and Facilities 982 and 984. I find that the action will have no significant impact on the quality of the human environment; thus, an Environmental Impact Statement is not warranted.

17 Dec 09

Date

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## Acronyms and Abbreviations

ACM	Asbestos-Containing Material
AF	United States Air Force
AFI	Air Force Instruction
AFTAC	Air Force Technical Application Center
ALARA	As-Low-As-Reasonably-Achievable
ATFP	Antiterrorism Force Protection
BMPs	Best Management Practices
C&D	Construction and Demolition
CCAFS	Cape Canaveral Air Force Station
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
CHP	Chemical Hygiene Plan
CO	Carbon Monoxide
CPG	Comprehensive Procurement Guidelines
CWA	Clean Water Act
CZM	Coastal Zone Management
CZMA	Coastal Zone Management Act
dB	decibel
dBA	“A-weighted” logarithmic scale
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EO	Executive Order
EPCRA	Emergency Planning and Community Right to Know Act
EPHA	Emergency Preparedness Hazards Assessment
ERP	Environmental Resource Permit
ESA	Endangered Species Act
FAC	Florida Administrative Code
FDEP	Florida Department of Environmental Protection
FEMP	Federal Energy Management Program
FONSI	Finding of No Significant Impact
GPP	Green Purchasing Program
HAZCOM	Hazard Communication
HAZMAT	Hazardous Materials
HID	High Intensity Discharge
HVAC	Heating, Ventilation, & Air Conditioning
IAW	In Accordance With
INRMP	Integrated Natural Resources Management Plan
IRP	Installation Restoration Program
LAs	Limited Areas
LEED	Leadership in Energy and Environmental Design
LMP	Light Management Plan
MBTA	Migratory Bird Treaty Act
MSDS	Material Safety Data Sheet



NEPA	National Environmental Policy Act
NESHAPs	National Emission Standards for Hazardous Air Pollutants
NRC	Nuclear Regulatory Commission
NRHP	National Register of Historic Places
NOx	Nitrogen Oxides
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
NRHP	National Register of Historic Places
ODCs	Ozone Depleting Chemicals
OPLAN	Operating Plan
OSHA	Occupational Safety and Health Administration
PAFB	Patrick Air Force Base
PCBs	Polychlorinated biphenyls
PM	Particulate Matter
PPAs	Property Protection Areas
PPE	Personal Protective Equipment
RCRA	Resource Conservation and Recovery Act
RIC	Radioisotope Committee
RMDF	Recovered Materials Determination Form
RSO	Radiation Safety Officer
SSC	Species of Special Concern
SHPO	State Historic Preservation Officer
SM	Square Meters
SO2	Sulfur Dioxide
SRA1A	State Road A1A
45 SW	45th Space Wing
SWI	Space Wing Instruction
T&E	Threatened and Endangered
TMDLs	Total Maximum Daily Loads
UFC/UBC	Uniform Fire Code/Uniform Building Code
US	United States
USEPA	United States Environmental Protection Agency
USFWS	United States Fish and Wildlife Service

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## **1.0 PURPOSE AND NEED FOR ACTION**

This Environmental Assessment (EA) has been prepared in accordance with the requirements of the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations, *Environmental Impact Analysis Process*, as promulgated in Title 32 of the Code of Federal Regulations (CFR) Part 989, and Department of Defense (DoD) Directive 6050. The EA evaluates the potential environmental consequences associated with the proposed construction of a United States (US) Air Force Technical Application Center (AFTAC) facility, including administrative and laboratory space, at Patrick Air Force Base (PAFB), FL, and associated demolition of wings “B” and “C” of Facility 989 and Facilities 982 and 984.

Chapter 1.0 of this EA provides background information on the existing AFTAC facility and describes the purpose of and need for the Proposed Action. A description of the Proposed Action and the No Action Alternative is provided in Chapter 2.0. Chapter 3.0 describes the existing conditions of specified environmental resources that could be affected by implementation of the Proposed Action alternatives. Chapter 4.0 addresses how those resources would be affected by implementation of the Proposed Action alternatives.

### **1.1 Background**

AFTAC provides national authorities quality technical measurements to monitor nuclear treaty compliance and develops advanced proliferation monitoring technologies to preserve our nation’s security. AFTAC’s laboratory performs high confidence measurements in support of nuclear testing treaty verification.

### **1.2 Location**

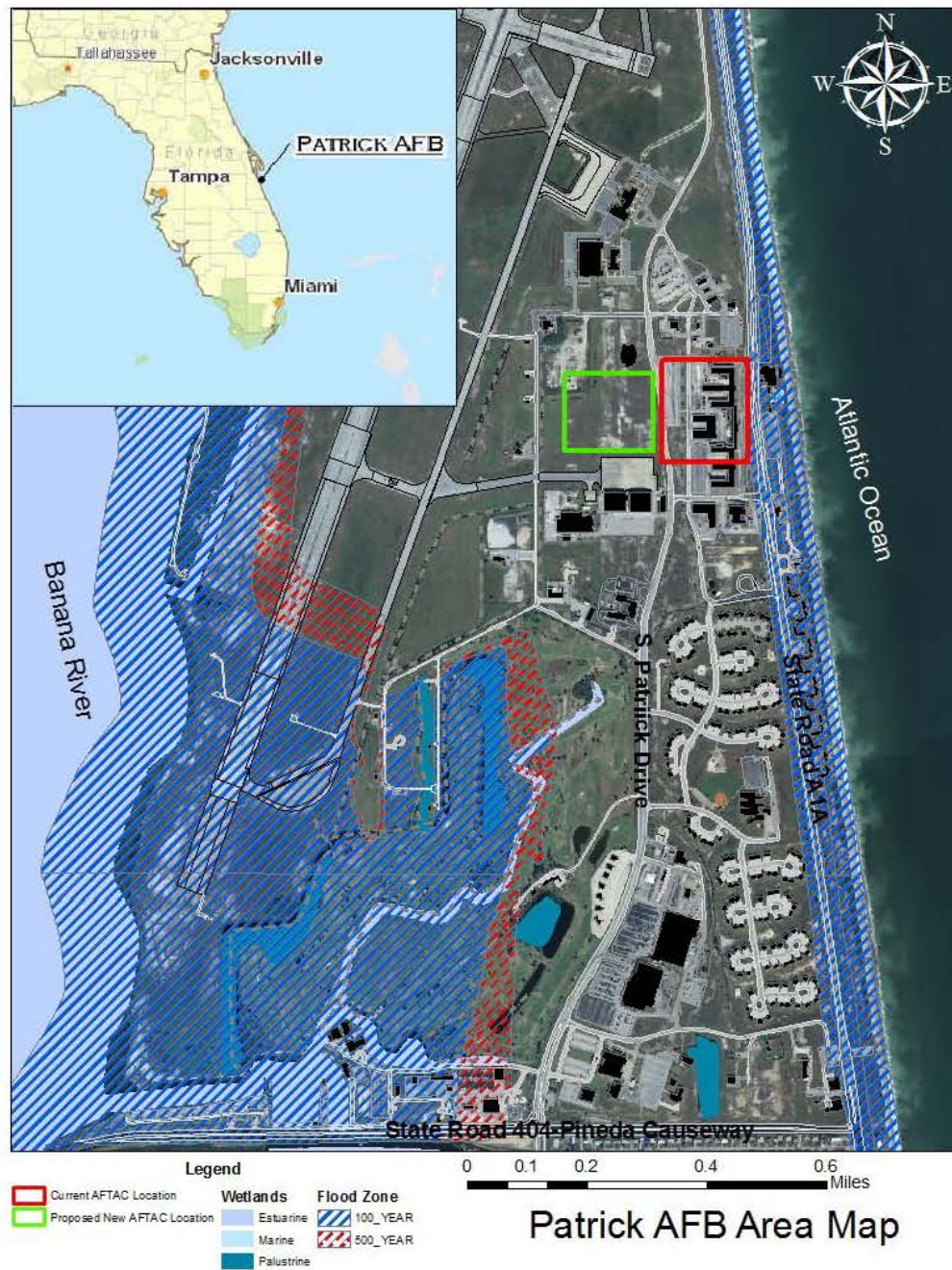
The existing AFTAC is located in Facility 989 on PAFB. PAFB is located on a barrier island on the east-central coast of Florida, south of the City of Cocoa Beach, and covers approximately 1,937 acres bounded by the Atlantic Ocean on the east and the Banana River on the west. The proposed location for the new facility is located directly west of the existing AFTAC facility and across the base’s main road, South Patrick Drive (Figure 1-1).

### **1.3 Purpose and Need for Action**

The purpose of the Proposed Action is to construct a facility to monitor nuclear treaty compliance and to develop verification technology for future treaties. The Proposed Action would partially demolish Facility 989, and completely demolish Facilities 982 and 984 located directly west of Facility 989. An adequately sized and configured operations support facility is required to conduct the unique missions of AFTAC. Space is needed for the eight AFTAC directorates, including research and development, technical production, seismic analysis and supporting space. Antiterrorism/Force Protection standards will also be applied to the facility. In addition to the administrative facility, AFTAC requires a laboratory to replace one which was closed due to the Base Realignment Closure Act of 1995. This new laboratory will ensure a robust laboratory system is available to meet national security requirements.

The existing facility 989 was constructed in 1957 utilizing design standards far below current design requirements for protection against frequent and strong coastal hurricanes. The facility is less than 300 feet from the Atlantic Ocean. The new facility will have the ability to survive 140 mph wind speeds associated with a low Category 4 hurricane, and will not be impacted by a 12 ft storm surge that has the chance of occurrence of 0.4% in any year. The facility is also

located less than 85 feet from the edge of State Highway A1A (Figure 1-2), and is not compliant with current Department of Defense (DoD) Minimum Antiterrorism Standards for Buildings.



**FIGURE 1-1: LOCATOR MAP FOR EXISTING AFTAC FACILITY AND PROPOSED AFTAC FACILITY LOCATION**



**FIGURE 1-2: EXISTING AFTAC FACILITY 989 ON STATE HIGHWAY A1A**

Brackish water was used for the masonry mortar in Facility 989 resulting in compromised wall strength, and x-ray examination indicates steel wall reinforcing required by the minimal design is defective or compromised in some locations. Inadequate wall design and improper window installation permit water intrusion when coastal winds are high and have led to pervasive mold throughout the facility. Inadequate air conditioning and humidity control systems have exacerbated this situation. Reconstruction to bring the facility up to minimal facility and anti-terrorism standards is cost prohibitive.

AFTAC's role as the sole DoD agency operating and maintaining a global network of nuclear event detection sensors as well as its role on the leading edge of verification technology for future treaties involving nuclear weapons programs (see Appendix F) has led to significant recent mission growth and realignment which the existing facility cannot accommodate. These unique missions, including the high population of uniquely qualified personnel (over 35 doctorates in nuclear physics, chemistry, and other technical fields) makes force protection paramount, but the proximity to the nearby highway makes complete remedial work prohibitively expensive and/or technically infeasible.

## **1.4 Scope of the Environmental Assessment**

This EA evaluates the potential site-specific environmental consequences associated with constructing of a new AFTAC facility and associated demolition of Wings "B" and "C" of Facility

989 (Proposed Action) and demolition of Facilities 982 and 984, and the No Action Alternative. This EA was produced using available information to the maximum extent possible. All applicable environmental data necessary was collected to describe current environmental conditions. The following biophysical resources were identified for analysis: Air Quality, Noise, Infrastructure and Transportation, Health and Safety, Hazardous Materials/Wastes, Biological and Cultural Resources, Geology, Soil, and Water Resources, and Socioeconomics.

## **1.5 Agencies Involved in Environmental Analysis**

The Florida State Clearinghouse reviews EAs for projects planned at PAFB pursuant to Gubernatorial Executive Order 95-359; the Coastal Zone Management Act; 16 U.S.C. SS 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. SS 4321, 4331-4335, and 4341-4347. The Clearinghouse sends copies of the draft EAs to applicable regulatory agencies for review and submits the review comments to 45 SW; the Clearinghouse response is incorporated in this EA (Appendix D).

Consultation with the U.S. Fish and Wildlife Service (USFWS) occurred under Section 7 of the Endangered Species Act to address light management requirements to avoid negative impact to protected sea turtles; USFWS response has been incorporated in this document (Appendix B).



## **2.0 Description of Proposed Action and Alternatives**

This Section describes the Proposed Action and the alternatives that were considered to accomplish the Proposed Action. One alternative location was initially considered for the location of the new AFTAC facility at PAFB.

### **2.1 Proposed Action**

The Proposed Action is to construct a multi-story facility of approximately 23,225 square meters (SM) with concrete pier foundation, reinforced concrete floor slab and walls to include structural steel frame and roof system, computer access flooring, fire protection, environmental controls, Sensitive Compartmented Information Facility, Intrusion Detection System, Uninterruptible Power Supply support, space allocation for clean rooms, security center, data processing center, mail room, vaults, storage, equipment repair/maintenance, and redundant electrical power and communication system. A perimeter fence, chillers, and outside break pavilion may also be included. The building and site would meet Antiterrorism/Force Protection (ATFP) requirements, have space for approximately 1,000 occupants, and provide adequate parking including use of existing parking lots currently for Facility 989.

In addition to the administrative facility, AFTAC requires a laboratory to replace one which was closed due to the Base Realignment Closure Act of 1995. The laboratory building, approximately 4,181 SM, is being proposed adjacent to the primary headquarters facility. The laboratory would provide capabilities to chemically process radiological samples. Approximately 30,000 SM of area will be required for parking near the 23,225 SM facility. Stormwater treatment areas are being included in the facility site design.

The new AFTAC facility would be constructed directly west of the existing facility (Facility 989), and north of Hangars 985 and 986 (Figure 2-1). Facilities 982 and 984 and the "B" and "C" Wings of Facility 989 would be demolished under this alternative.

### **2.2 Alternatives Eliminated from Further Consideration**

#### **2.2.1 Major Renovation of the Existing AFTAC Facility**

The renovation of the existing AFTAC Facility 989 was considered. This facility was built in 1957 and has become a maintenance burden with continual work orders to repair the Heating, Ventilation and Air Conditioning (HVAC), electrical panels/components, fire protection, elevators, windows, and remove mold/mildew. Improper masonry mortar and steel wall reinforcement has compromised wall strength in some locations. Although providing "A" Wing of Facility 989, currently occupied by another tenant, for AFTAC expansion would afford space needed for new personnel (about 300 projected through 2010), the repairs or complete reconstruction to bring the facility to minimum design and anti-terrorism standards is cost prohibitive. Likewise, Facility 989 is critically out of step with the ATFP requirements with proximity to State Road A1A (SRA1A) and the Atlantic Ocean. Therefore, major renovation of the Building 989 was not considered a viable alternative, and was eliminated from further consideration.



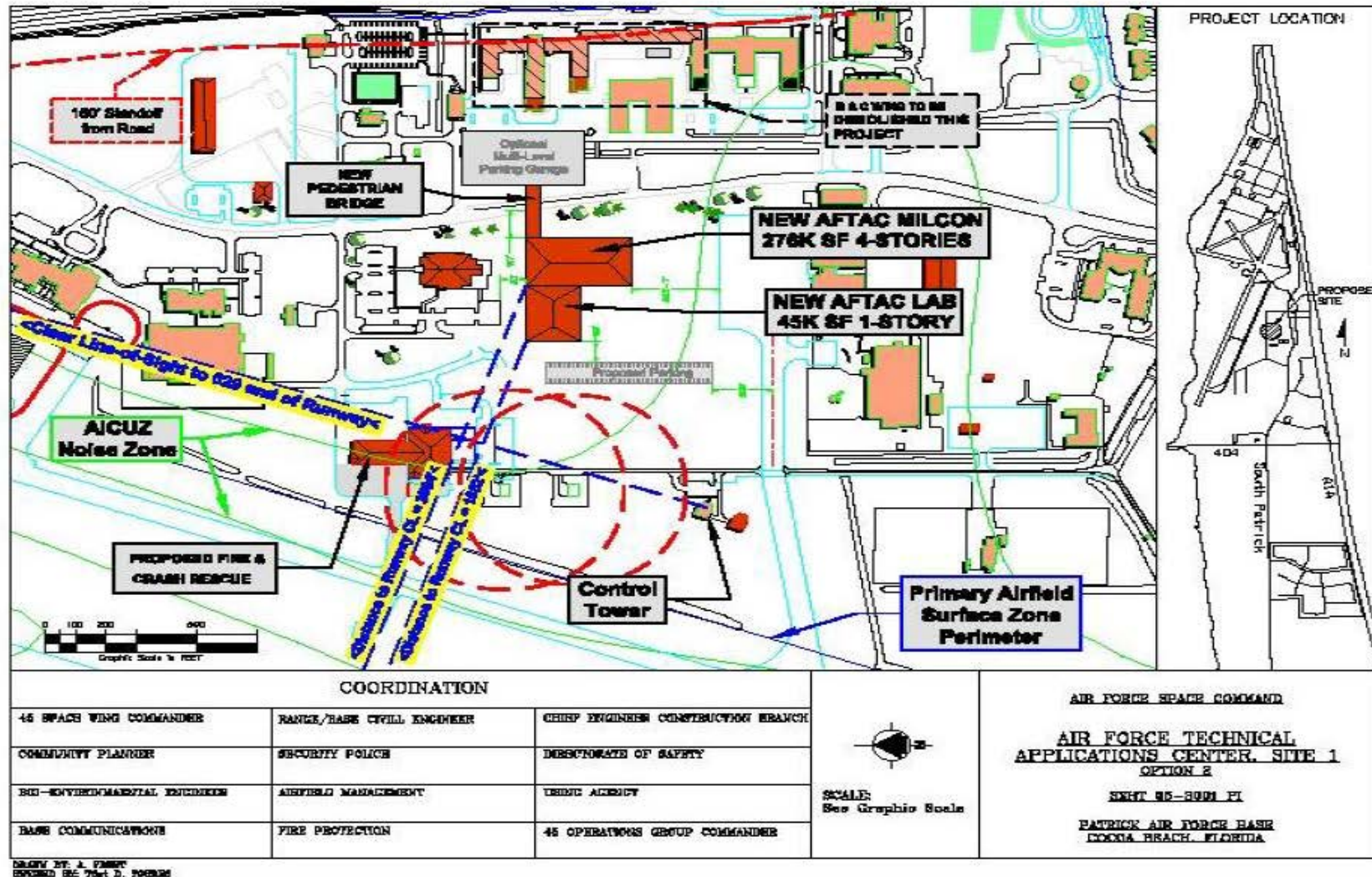


FIGURE 2-1: PROPOSED AFTAC FACILITY SITE PLAN

### **2.2.2 New Construction at Alternate Location**

An alternative to build the new AFTAC facility in an area of PAFB Central Housing was considered. This location, similar to the proposed preferred siting, is out of wetlands, floodplains and prime habitat for native flora and fauna, however it is closer to SRA1A. The housing location for AFTAC would maintain area for new airfield mission growth due to its proximity to the runways/taxiways, however, the location would impede ATFP maximum compliance. In addition, approximately 129 housing units in Central Housing would need to be demolished for adequate space for new AFTAC facilities, however, the housing privatization developer is not planning to demolish all of the houses required to site the AFTAC facility at this location (Figure 2-2). Demolition for the houses on four streets is projected for February 2010, but the houses on two streets on the north end of Central Housing would remain. Also, this Central Housing siting would place the AFTAC facility just to the north of the new Child Development Center and just to the south of the Truck Inspection gate. Due to potential Force Protection and safety issues due to the proximity of the Child Development Center and Truck Inspection gate, the Central Housing location was not considered a viable alternative, and was eliminated from further discussion.

### **2.2.3 Utilize Existing Facilities on PAFB**

Several facilities are available on PAFB that have small areas that could be utilized by AFTAC personnel (e.g., 3rd floor of Building 423). However, there are no facilities that have a large enough space available to support the entire mission in one location and allow the cohesiveness of personnel required. Major security risks would result from utilizing multiple alternate secure sites and transporting critical information and material between sites would incur significant administration overhead costs. Therefore, the use of existing facilities was not considered a viable alternative, and was eliminated from further consideration.

## **2.3 No Action Alternative**

The only retained alternative to the Proposed Action was the No Action Alternative. Under the No Action Alternative, the existing Building 989 would continue to serve as the AFTAC facility. This facility does not have adequate space to accommodate the needs and requirements of the current mission. The existing facility would require major renovations to operate properly and efficiently, and the renovations are cost prohibitive. In addition, Facility 989 is critically out of step with the ATFP requirements with proximity to SRA1A and the Atlantic Ocean. Finally, a new laboratory will ensure a robust laboratory system is available to meet national security requirements and will allow conversion of a smaller and limited laboratory at Cape Canaveral Air Force Station (CCAFS) into a secondary testing site. With the No Action Alternative, there are significant foreseeable mission impacts if the new primary AFTAC laboratory is not constructed because of the high risk of single point of failure due to security incidents or natural disasters, like wildfires, that have caused issues in the past at the smaller laboratory at CCAFS.

## **2.4 Summary of Potential Environmental Issues**

Ten broad environmental components were initially considered to provide a context for understanding the potential effects of the Proposed Action alternatives and as a basis for assessing the significance of potential impacts. The areas of environmental consideration were air quality; biological resources; cultural resources; geology, soil, and water resources; hazardous materials and waste; health and safety; infrastructure and transportation; land use and zoning; noise; and socioeconomics.

No significant impacts from implementation of either the Proposed Action or No Action Alternative have been identified for any of the resource areas examined in this document. Minor impacts associated with several of the environmental components are briefly summarized below, and a more detailed analysis of potential impacts to the remaining resource areas (i.e., threatened and endangered species, hazardous materials and waste and health and safety) is presented in Chapter 4.0.

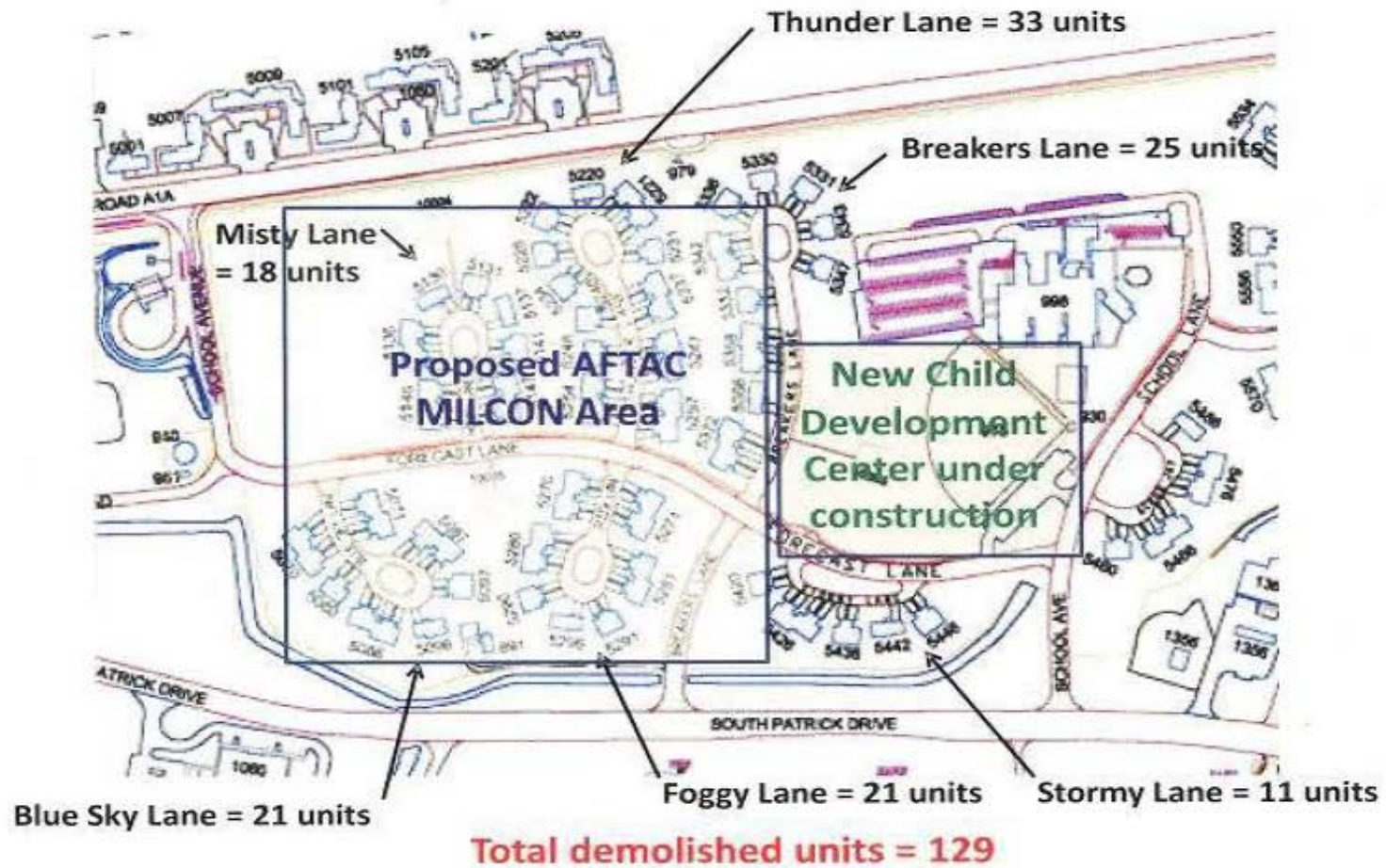


FIGURE 2-2: PROPOSED PROJECT SITE PLAN IN CENTRAL HOUSING

A comparison matrix of the potential impacts resulting from the Proposed Action and No Action Alternative to all of the resource areas considered is provided in Table 2-1. The three levels of impact utilized in this document are defined as follows:

- No Impact - No impact is predicted.
- Not Significant Impact - An impact is predicted, but the impact does not meet the intensity/context significance criteria for the specific resource.
- Significant Impact - An impact is predicted that meets the intensity/context significance criteria for the specific resource.

**Table 2-1: Environmental Impact Matrix**

<b>Environmental Components</b>	<b>Proposed Action</b>	<b>No Action Alternative</b>
<i>Air Quality</i>	No Significant Impact	No Significant Impact
<i>Biological Resources</i>	No Significant Impact	No Impact
<i>Cultural Resources</i>	No Impact	No Impact
<i>Geology and Soils</i>	No Significant Impact	No Impact
<i>Hazardous Materials and Waste</i>	No Significant Impact	No Significant Impact
<i>Health and Safety</i>	No Significant Impact	No Significant Impact
<i>Infrastructure and Transportation</i>	No Significant Impact	No Impact
<i>Land Use and Zoning</i>	No Impact	No Impact
<i>Noise</i>	No Significant Impact	No Impact
<i>Socioeconomics</i>	No Significant Impact	No Significant Impact
<i>Water Resources</i>	No Significant Impact	No Significant Impact

## **2.4.1 Issues Eliminated from Detailed Analysis**

Following a preliminary analysis in a AF Form 813, Request for Environmental Impact Analysis, signed 7 July 2006 (Appendix A), the AF determined that no impacts, or less than significant impacts, would be anticipated to air quality; geology and soils; land use; noise; and socioeconomics from the Proposed Action. Under the No Action Alternative, no changes to the existing environment would occur. However, continued health and safety/security issues would occur from the location and age of the existing facility. Upon further evaluation, the following is a summary of the minor and not significant impacts potentially associated with the Proposed Action.

### **2.4.1.1 Air Quality**

Air Force Instruction (AFI) 32-7040, *Air Quality*, identifies AF requirements for an air quality compliance program. Other applicable air quality requirements are identified in Table 2-2.



**Table 2-2: Summary of Air Quality Requirements**

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
AFI 32-7086, Chapter 4	Minimize loss and conduct recovery, recycling, and reuse of Ozone Depleting Substances (ODS) to the maximum extent practicable.	Manage to minimize releases of ODCs into the environment.	AF
AFI 32-7040	Estimate air emissions for inclusion in the Air Emissions Inventory	Track vehicle/equipment uses.	AF
Clean Air Act	Title V Air Operating Permit National Emissions Standards for Hazardous Air Pollutants (NESHAPs)	Report Hazardous Air Pollutants for air emissions inventory	USEPA/FDEP

In Florida, regional air quality is assessed at the county level. PAFB is located within Brevard County, which has been designated by both the United States Environmental Protection Agency (USEPA) and the Florida Department of Environmental Protection (FDEP) to be in attainment for all criteria air pollutants. Table 2-3 identifies recent (1999, 2000, and 2001) monitored air concentrations near PAFB. A conformity determination is not required. However, several sources of air emissions were considered that could result from implementation of the Proposed Action. Notification to FDEP is required 10 days prior to facility demolition whether asbestos is present or not. The installation of any new air emission sources (boilers, laboratory emissions, etc.) will be coordinated through 45 Asset Management/Environmental for permit determination. FDEP requires an air permit to be in place prior to the initiation of construction of any facility that may reasonably be a source of air pollution. Upon receipt of a construction permit, PAFB may be required to update the Title V Air Permit to include any new sources of air emissions. However, changes in local air quality resulting from these sources would not be significant. Each potential source of air pollution is reviewed in this section.

### Asbestos

Asbestos Containing Material (ACM) surveys for Facilities 982, 984 and 989 indicate various floor tile/mastic, base molding/mastic, and carpet mastic contain ACM. If other materials are suspect, testing will occur for disposal characterization. Asbestos is a regulated substance because it is a carcinogen and a cause of asbestosis (a lung disease). Asbestos is a designated hazardous air pollutant under the NESHAPs of the CAA. The USEPA issues regulations to ensure compliance with the CAA. The Occupational Safety and Health Administration (OSHA) also provides for worker protection for employees who work around or remediate Asbestos ACM. Friable ACM, which can be pre-existing or generated during a demolition activity, refers to any material containing more than one percent asbestos that can be crumbled, pulverized, or reduced to powder when dry, by using hand pressure or similar mechanical pressure.

When asbestos poses a health danger from the release of airborne fibers (because it is in a friable state), Air Force policy (AFI 32-1052, *Facility Asbestos Management*) is to remove or isolate it.

After demolition, all friable asbestos must be encapsulated or removed, the site must be approved, and the asbestos waste disposed of in an approved landfill.

A pre-demolition ACM survey will be completed and ACM will be abated before demolition. Project designs for demolition of this facility will fully address the requirements for asbestos (40 CFR 61 Subpart M), 62-257, Florida Administrative Code, and the 45 SW Asbestos Management Operating Plan (OPLAN).

**Table 2-3: Summary of Ambient Air Monitored Values near PAFB**

Pollutant	Averaging Period	Rank	Location	1999 <sup>a, b</sup>	2000 <sup>a, b</sup>	2001 <sup>a, b</sup>
Carbon Monoxide (CO)	8-hour	Highest	Winter Park, Orange County	3	5	2
	8-hour	Second highest	Winter Park, Orange County	2	2	2
	1-hour	Highest	Winter Park, Orange County	3	8	8
	1-hour	Second highest	Winter Park Orange County	3	8	3
Nitrogen Dioxide (NO <sub>2</sub> )	Annual	Arithmetic Mean	Winter Park, Orange County	0.012	0.012	0.012
Ozone (O <sub>3</sub> )	1-hour	Highest	Cocoa Beach, Brevard County	0.106	0.095	0.099
	1-hour	Highest	Winter Park, Orange County	0.109	0.109	0.100
	1-hour	Second Highest	Cocoa Beach, Brevard County	0.087	0.093	0.086
	1-hour	Second Highest	Winter Park, Orange County	0.100	0.106	0.093
Particulate Matter (PM <sub>10</sub> )	Annual	Arithmetic Mean	Titusville Airport, Brevard County	16	17	19
	Annual	Arithmetic Mean	Winter Park, Orange County	21	20	19
	24-hour	Highest	Titusville Airport, Brevard County	56	35	96
	24-hour	Highest	Winter Park, Orange County	56	46	46
	24-hour	Second Highest	Titusville Airport, Brevard County	27	34	56
	24-hour	Second Highest	Winter Park, Orange County	35	39	41
Sulfur Dioxide (SO <sub>2</sub> )	Annual	Arithmetic Mean	Winter Park, Orange County	0.002	0.003	0.002
	24-hour	Highest	Winter Park, Orange County	0.008	0.013	0.014
	24 hour 2 <sup>nd</sup>	Second Highest	Winter Park, Orange County	0.007	0.009	0.008
	3-hour	Highest	Winter Park, Orange County	0.042	0.043	0.032
	2-hour 2 <sup>nd</sup>	Second Highest	Winter Park, Orange County	0.029	0.027	0.027

<sup>a</sup>Concentrations are expressed in parts per million (ppm), except PM<sub>10</sub>. PM<sub>10</sub> concentrations are expressed in µg/m<sup>3</sup>.

<sup>b</sup>2001 AIRSData Monitor Report, FDEP

### Refrigerant Recovery

New refrigerant units would use non-Class I Ozone Depleting Substances (ODSs) such as R22, R123, R134a, or ammonia as the refrigerant. New units utilizing R-11 or R-12 would not be purchased (Engineering Technical Letter 91-7, *CFC Limitation in HVAC Systems*). Any refrigerants encountered in facilities proposed for demolition would be recovered and recycled. Additionally, no facility systems must be procured (that will remain in AF inventory beyond 2020) that use Class II ODS in operations or maintenance per AFI 32-7086.

### Vehicle Use

Vehicles would emit exhausts (greenhouse gases) such as carbon monoxide (CO), nitrogen oxides (NO<sub>x</sub>), and sulfur dioxide (SO<sub>2</sub>) during project activities. Dust particles (i.e., particulate matter (PM)) would also be suspended during demolition and construction activities. The current Title V Air Operating Permit would not need to be amended due to these activities, as the impacts associated with the Proposed Action would be minor and are covered by the existing permits. Dust suppression techniques, such as periodic site watering would be used.

### Aboveground/Underground Storage Tanks

Information on the size and planned contents of any proposed aboveground and/or underground storage tanks will be submitted to the 45 Asset Management/Environmental Storage Tank Manager. Multiple generators are anticipated to be located onsite for backup power requirements. These generators will have enough power to maintain continual operations at a full load with an extended outage to the AFTAC facility for up to 72 hours to prevent mission interruptions. There is a potential that 4-6 generators with 14,000 to 20,000 gallon diesel double walled storage tanks will be utilized to provide backup power. The proposed location for the generators is on top of an elevated berm to reduce chance of damage or failure due to storm surge. All fire, safety, and emergency response requirements will be addressed during the design phase. All regulated fuel storage tanks will be constructed in accordance with (IAW) Florida Administrative Code (FAC) 62-761, and will be inspected and approved by FDEP before filling with fuel. Records on contents, either loaded into each tank or dispensed from each tank, will be kept by the Fuels Management and Bulk Storage Operations group in accordance with AFI 23-201 and AFI 23-110. This information, required for all tanks (including fuel, chemical storage, hazardous waste storage, and pressurized), is a requisite for calculating total air emissions from AF storage tanks (i.e., "through put" and "loading or unloading" emissions). In addition, any tanks that are removed during demolition activities will adhere to FDEP regulations, and be coordinated with 45 Asset Management/Environmental.

## **2.4.1.2 Biological Resources**

The following information was derived from several sources; much of the detailed information included has been extracted from the *Integrated Natural Resources Management Plan* (INRMP). Biological resources covered in this section include native and nonnative vegetation communities and special-status species. Vegetation communities include both upland and wetland habitats. Special-status species include species of special concern (SSC), threatened and endangered species (T&E), and migratory birds. T&E Sea Turtles will be further discussed in Chapters 3 and 4.

The AF is committed to the long-term management of all natural areas on its installations, as directed by Sikes Act and AFI 32-7064, *Integrated Natural Resources Management*. Long-term management objectives are identified in the 45 SW's 2008 INRMP with specific land-management objectives such as wetland protection and conservation and threatened and



endangered species habitat restoration.

The Proposed Action would occur in a previously disturbed area with minimal vegetation. Specific requirements are identified in Table 2-4 that would minimize impacts to biological resources.

**Table 2-4: Summary of Biology Resources Requirements**

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
45 SW Instruction 32-7001	Use full cut off, well shielded, low wattage, low pressure sodium or amber lights	Reduce the amount of exterior lighting visible from the beach during the sea turtle nesting season (1 May – 31 October) from 2100 to 0600 to reduce sea turtle hatchling mortality caused by disorientation.	45 SW
Endangered Species Act	Consultation with US Fish and Wildlife Service (USFWS), and if necessary, obtain and comply with biological opinions/incidental take permits, comply with existing Threatened and Endangered (T&E) permits	Conserve ecosystems that support T&E species. Section 7 requires Federal agencies to insure that any action authorized, funded or carried out by them is not likely to jeopardize the continued existence of listed species or modify their critical habitat.	USFWS
EO 13112	Remove and control invasive species	Prevent the introduction of invasive species and provide for their control and minimize the economic, ecological, and human health impacts that invasive species cause.	DoD
Migratory Bird Treaty Act	Consult with USFWS as necessary and comply with applicable permits	Prohibits destruction of the eggs or nest of migratory birds without a permit.	USFWS
AFI 32-7064	Long-term management of all natural areas on the Installation	Protect listed species, biodiversity, wetlands, etc.	AF

### Vegetation

Project activities would generally occur on previously disturbed and developed land that is vegetated primarily with Bahia grass, ornamental shrubs, a few cabbage palms, and invasive vegetation such as Brazilian pepper on a manmade berm currently on the northwest edge of the proposed site.

Any exotic, invasive vegetation encountered (such as Brazilian pepper or cogon grass) will be removed and properly treated on site. New landscaping/shade trees/groundcover will comply with Executive Order (EO) 13112, *Invasive Species*, such that native plants are used as much as practical and no invasive plants are purchased. Landscaping plans should incorporate native plants that are drought tolerant to minimize or eliminate irrigation and high-cost maintenance requirements. The 45 Asset Management/Environmental can be contacted for guidance on native plants throughout the design phase.

### Wetlands and Floodplains

Wetlands are the transition zones between dry upland ecosystems and deeper aquatic habitats. Each wetland area is unique according to its surrounding geologic, hydrologic, and climatic conditions. Wetlands provide flood control, aquifer recharge, coastal protection, and act to help filter pollutants from the ecosystem. Wetlands often support a wide range of rare and endangered aquatic plants and wildlife. However, jurisdictional wetlands are limited at PAFB, and are not located in the Proposed Action area (Figure 1-1). An open drainage canal located parallel to the Proposed Action location is not anticipated to be impacted by Proposed Action activities. The Proposed Action location is not within the 100-year floodplain.

### Wildlife

Various species of wildlife inhabit, utilize, or frequent PAFB. The Installation is located on a barrier island and these types of ecosystems are important natural areas that support many plants, animals, and natural communities. Barrier islands along the Atlantic coast are especially important for nesting sea turtles, populations of small mammals, and as foraging and loafing habitat for a variety of resident and migratory shorebirds, wading birds, and songbirds. Refer to the 2008 INRMP for specific information on wildlife found at PAFB.

Noise rather than the sight of machines appears to cause disturbance to wildlife. The combination of increased noise levels and human activity would likely cause temporary displacement of some animals that forage, feed, nest, or have dens within a 15-meter radius (or greater for more sensitive species) of noise sources.

In order to avoid attracting wildlife to the work site, the contractor would keep the construction area, including storage areas, free from accumulation of waste materials or rubbish at all times. All waste materials, except indicated salvaged items with ACM, generated by demolition activities would be hauled off at the end of each workday and disposed. Upon completion of the demolition, the contractor would leave the work site in a clean and neat condition, satisfactory to the Contracting Officer. No significant impacts are anticipated to wildlife in the Proposed Action area.

### Migratory Birds

PAFB is located along one of the major migratory flyways for neo-tropical migrants that breed in eastern North America. Therefore, habitat on PAFB that is suitable for migrant birds is of conservation concern. During surveys conducted at PAFB in 1996 and 2007/2008, many neotropical migrants were observed using the dune habitat and only the occasional foraging cattle egret or ibis has been observed at the proposed site. However, no nesting has been observed at the Proposed Action site.

### Threatened, Endangered and Special Concern Species

No Federal-listed T&E plant species have been identified at PAFB. The following plants listed by the State of Florida have been observed on the Base's dune/beach interface: beach star, inkberry, and prickly pear cactus. These plants do not occur near the proposed project area west of SRA1A.

There is no formally designated critical habitat on PAFB, as defined under Section 4 of the Endangered Species Act (ESA). However, the proposed action has the potential to impact threatened and endangered species; therefore, in accordance with Section 7 of the Endangered Species Act, consultation with the USFWS will be completed by the Air Force prior to initiation of construction. A Light Management Plan (LMP) in conjunction with the lighting design would need to be reviewed and approved by 45 Asset Management/Environmental and USFWS

before purchase of light fixtures would be acceptable per the Biological Opinion issued to the 45 SW for light management under the ESA. Refer to Chapters 3 and 4 for a more detailed discussion of potential minor impacts.

### **2.4.1.3 Cultural Resources**

Cultural resources include prehistoric-archaeological, historic, architectural, and Native American resources. Areas of potential impact include properties, structures, landscapes, or traditional cultural sites that qualify for listing in the National Register of Historic Places. Section 106 of the National Historic Preservation Act of 1966 (as amended) requires federal agencies to consider the effects of their actions on historic properties. AFI 32-7065, *Cultural Resources Management*, provides guidelines for the protection and management of cultural resources on AF-managed lands.

There has been no systematic archaeological survey of PAFB and there are no recorded sites within the boundaries of the Base. A reconnaissance study conducted by the National Park Service in 1982 found that the two shorelines at PAFB were severely disturbed due to past filling and paving activities, and that the remaining property at PAFB was either subjected to extensive earth moving or was developed. The study concluded that the likelihood that significant sites were preserved was limited and no cultural resource survey was planned. The Proposed Action location is in a previously disturbed area, and no historic properties are located within this area. No impacts to cultural resources are anticipated from the Proposed Action or the No Action Alternative.

No survey, despite an intense effort and excellent research sampling strategy, precludes the possibility that an archaeological site may be discovered during subsequent clearing activities. Federal cultural resource preservation statutes (including the Native American Graves Protection and Repatriation Act) mandate that should artifacts become apparent during construction or clearing, such materials should be identified and evaluated by an archaeologist. Should human remains be encountered, federal statutes specify that work shall cease immediately and the proper authorities be notified. (Federal Register, Rules and Regulations, Dec. 4, 1995, Vol. 60, No. 232:62161, Section 10.5).

Facilities 982, 984 and 989 have been evaluated for eligibility on the National Register of Historic Places (NRHP), and the Florida State Historic Preservation Officer (SHPO) has concurred that the facility is not eligible for listing on the NRHP. Although the two storage magazines (1327 and 1330) located near the Proposed Action site are not anticipated to be impacted by activities, these facilities have also been determined to be ineligible for listing on the NRHP (Appendix C).

### **2.4.1.4 Geology and Soils**

The potential for erosion is highest during demolition and construction activities. To reduce the impacts of erosion, standard construction Best Management Practices (BMPs) such as silt fencing would be used. These measures include the use of silt fences, mulch, siltation basins, and revegetation of disturbed areas to control erosion. If Facility 989 is demolished and work is potentially required to disturb below grade, then guidance from the 45 Asset Management/Environmental Installation Restoration Program (IRP) will be provided concerning handling any contaminated media from former contamination sites near Facility 989 (Appendix E). Because the existing structures are located on relatively level terrain, fill will be used to elevate the site, and only small areas of soil (i.e., sand) would be disturbed, no significant impact to soils are anticipated.

### 2.4.1.5 Infrastructure and Transportation

Infrastructure and transportation includes utilities, solid waste management, and transportation networks. AFI 32-7042, *Solid and Hazardous Waste Compliance*, identifies compliance requirements for solid waste. A summary of requirements for Infrastructure and Transportation is identified in Table 2-5.

**Table 2-5: Summary of Infrastructure and Transportation Requirements**

Permit/Action(s)	Requirement	Agency or Organization
Hazardous Waste compliance	AFI 32-7042	45 Asset Management/Environmental
AF Form 103 approval Attendance of Dig Permit Meetings Utility Locate/Excavation Permit	Any excavation activity	Space Gateway Support Mission Support, Excavation Administrator  45 SW Civil Engineering Squadron

#### Solid Waste

The Pollution Prevention Act of 1990 (42 U.S.C. 13101(b)) established a National policy to prevent or reduce pollution at the source. The environmental implications of the Proposed Action activities will be considered during the design phase to minimize or eliminate environmental liability, and a pollution prevention environmental analysis will be performed. All construction contracts are required to comply with AFI 32-7086, *Hazardous Materials Management*, and will ensure that all recyclable material (e.g., concrete, metals) is recycled and recycled quantities reported by weight to 45 Asset Management/Environmental.

All materials, equipment, and metals identified as potentially salvageable during demolition would be staged for possible recycling or reuse. Real property items found on/within the facilities slated for demolition should be assessed and offered for reutilization with DoD, transferred to other federal agencies, or donated to state and local government or other qualified organizations. If these options are not feasible, excess property may be sold to the public as surplus. As part of Pollution Prevention measures, all options should be pursued through the Defense Reutilization and Marketing Office or local direct sales as alternatives to solid waste disposal.

Any solid waste will be managed in accordance with the instructions set forth in the specifications of the contract. The contractor would be responsible for sampling all wastes to determine whether they are hazardous or non-hazardous. Results of the laboratory analysis would be provided to the Contracting Officer.

It is anticipated that all non-hazardous, non-recyclable construction and demolition debris would be disposed in the Brevard County Landfill. Use of the Cape Canaveral Air Force Station (CCAFS) landfill is mandatory for ACM disposal. The 45 Asset Management/Environmental will approve disposal of any wastes or materials into the sewage treatment system.

The Contractor and all Subcontractors involved in this project will comply with Air Force Green Purchasing Program (GPP) requirements. GPP is the purchase of environmentally friendly products and services (e.g., products made from recycled or recovered materials). Federal agencies, their contractors and subcontractors are required, whenever practicable, to maximize the purchase of GPP products and services specifically products made from recovered or recycled materials and Energy Star or Federal Energy Management Program-designated

energy efficient products (Executive Orders 13221, 13423, RCRA 6002, EPACT 2005 and the Farm Security and Rural Investment Act of 2002),. Products made from recovered or recycled materials can be found at the USEPA Comprehensive Procurement Guide (CPG) web site at <http://ofee.gov/gp/gp.asp>. The CPG lists "Environmental Protection Agency (USEPA) Designated Guideline Items" containing minimum recycled or recovered materials content according to RCRA 6002 and EO 13101 (<http://www.ofee.gov/>). Prior to project closeout, the design engineer and the contractor will provide a completed copy of the Recovered Materials Determination Form (RMDF) to document purchases of designated guideline items or will provide a justification as to why designated guideline items were not utilized. The RMDF form will be placed into the contract file at contract close-out. GPP requirements will also take consideration of life cycle costing, i.e., the cost of a product, including capital, installation, operating, maintenance, and disposal costs over the lifetime of that product.

The Leadership in Energy and Environmental Design (LEED) is a third-party certification program and the nationally accepted benchmark for the design, construction and operation of high performance green buildings. LEED promotes a whole-building approach to sustainability by recognizing performance in five key areas of human and environmental health: sustainable site development, water savings, energy efficiency, materials selection and indoor environmental quality. The proposed AFTAC facility would have a "Silver" LEED certification.

#### Utilities

Utility structures and lines would be identified prior to any excavation and AF Form 103 would be obtained. Should unidentified underground utilities be encountered during excavation, operations should cease until all utilities are properly identified.

At the Proposed Action site, underground utility lines would be laid and tied into the existing mains. These lines would include electrical, water, wastewater and site drainage lines with appropriate drop inlets. It is anticipated that a new lift station will be required due to the age of the existing lift station.

All lighting will be coordinated with 45 SW Civil Engineering to ensure the appropriate balance between safety, energy conservation, sea turtle protection and reduced light pollution has been achieved. All exterior lighting will be in compliance with 45 SWI 32-7001, *Exterior Lighting Management*.

#### Transportation

The increase in personnel would have a negligible impact on transportation issues at PAFB. The proposed pedestrian bridge connecting the parking lot east of South Patrick Drive with the facility west of the road will be designed to allow expansion of the base's roadways for future growth planning.

### **2.4.1.6 Land Use**

In recognition of the increasing pressures of over-development upon the nation's coastal resources, Congress enacted the Coastal Zone Management Act (CZMA) in 1972. The CZMA encourages states to preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as wetlands, floodplains, estuaries, beaches, dunes, barrier islands, and coral reefs, as well as the fish and wildlife using those habitats.

The Secretary of Commerce delegated the administration of the CZMA to the National Oceanic and Atmospheric Administration (NOAA). The Office of Ocean and Coastal Resource Management administers individual state programs.

The CZMA contains environmental compliance implications for many federal projects and programs "directly affecting" the states' coastal zones. Federal property is exempt from the definition of the states' coastal zones, but activities occurring on federal property that directly affect the states' coastal zones will comply with the CZMA. The section of the Act most significant to the Proposed Action is Section 307, "Coordination and Cooperation." Section 307(c)(1)(A) mandates that each federal agency activity within or outside the coastal zone that affects any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent, to the maximum extent practicable, with the enforceable policies of approved state management programs.

Applicable federal actions will be consistent with NOAA's federal consistency regulations at 15 CFR Part 930. Federal consistency is required for federal actions that are defined as federal activities, including any development projects (15 CFR Part 930, Subpart C). Subpart C regulations require that all federal activities and development projects be consistent to the maximum extent practicable with federally approved state Coastal Zone Management (CZM) programs. Activities will be reviewed to determine which directly affect the coastal zone of states with approved plans and provide a written "consistency determination" to the authorized state CZM agency for all activities directly affecting the state's coastal zone. As part of the Environmental Resource Permit (ERP) process and in review of this EA through the Florida Clearinghouse, the Proposed Action is anticipated to be consistent with Florida's CZM program.

Under the No Action Alternative, the existing AFTAC facility would continue to be used and repaired as needed, and would also be consistent with the CZMP.

A list of applicable regulations for land use and zoning requirements can be found in Table 2-6.

#### **2.4.1.7 Noise**

The USEPA administers the Noise Control Act of 1972, and has identified 65 dB (A-scale) as an acceptable noise level for compatible land uses. This level is not regarded as a noise standard, but as a basis to set appropriate standards that should also factor in local considerations and issues.

Noise impacts from the operation of construction equipment are usually limited to a distance of 1,000 feet or less. Vehicles associated with the Proposed Action typically have a dBA between 65 and 100, at a distance of 50 feet (USEPA, 1971). The proposed project is located adjacent to a highway and there are no sensitive receptors (e.g., schools, hospitals) in the vicinity. All work activities would be confined to daylight hours to avoid nuisance noise in the evenings.

In accordance with 29 CFR 1910, protection against the effects of noise exposure would be provided. When employees are subjected to sound levels, exceeding those listed in Table 2-6, feasible administrative or engineering controls would be utilized. If such controls do not reduce sound levels to the levels presented in Table 2-7, hearing protection would be provided and used to reduce exposure.

#### **2.4.1.8 Socioeconomics**

Socioeconomics comprise such interrelated resources as population, employment, income, temporary living quarters (during construction activities), and public finance. It is not anticipated that the Proposed Action will affect employment patterns on a permanent basis or induce substantial growth or growth-related impacts. No increase in population levels would result. No significant impacts are anticipated from the Proposed Action.

**Table 2-6: Summary of Land Use and Zoning Requirements**

Law or Rule	Permit/Action(s)	Requirement	Agency or Organization
Coastal Zone Management Act	Development projects will be consistent to the maximum extent practicable with Florida's Coastal Zone Management Program	Preserve, protect, develop, and, where possible, restore or enhance valuable natural coastal resources such as floodplains, and dunes	FDEP, Air Force
Florida Statutes, Section 373.428	Federal Consistency	When an activity regulated under this part is subject to federal consistency review under Section <a href="#">380.23</a> , the final agency action on a permit application submitted under this part shall constitute the state's determination as to whether the activity is consistent with the federally approved Florida Coastal Management Program. Agencies with authority to review and comment on such activity pursuant to the Florida Coastal Management Program shall review such activity for consistency with only those statutes and rules incorporated into the Florida Coastal Management Program and implemented by that agency. An agency which submits a determination of inconsistency to the permitting agency shall be an indispensable party to any administrative or judicial proceeding in which such determination is an issue; shall be responsible for defending its determination in such proceedings; and shall be liable for any damages, costs, and attorneys' fees should any be awarded in an appropriate action as a consequence of such determination.	NOAA
Florida Statutes, Section 380.23	Federal Consistency	(1) When a federally licensed or permitted activity subject to federal consistency review requires a state license, the issuance or renewal of a state license shall automatically constitute the state's concurrence that the licensed activity or use, as licensed, is consistent with the federally approved program. When a federally licensed or permitted activity subject to federal consistency review requires a state license, the denial of a state license shall automatically constitute the state's finding that the proposed activity or use is not consistent with the state's federally approved program, unless the U.S. Secretary of Commerce determines that such activity or use is in the national interest as provided in the Coastal Zone Management Act.	NOAA
Florida Administrative Code 62B-33.004 (3) (b)	Exemptions from Permit Requirements.	(3) In addition to the exemptions provided in Section 161.053(12), F.S., the following are exempt from the provisions of Section 161.053, F.S., and this rule chapter: (b) Construction, excavation, and damage or destruction of vegetation conducted by the United States Government on lands owned and maintained by the United States Government.	FDEP

**Table 2-7: Permissible Noise Exposures**

Duration Per Day (Hours)	Slow Response Sound Level (dBA)
8	90
6	92
4	95
3	97
2	100
1.5	102
1	105
0.5	110
0.25 or less	115

#### **2.4.1.9 Water Resources**

Water resources could potentially be affected by the Proposed Action activities if soil erosion occurs from land disturbance during construction. Prior to and during such activities, erosion and sediment control measures would be designed and implemented to retain sediment on-site and prevent violations of State and Federal water quality standards through siltation fences or other BMPs such as National Pollutant Discharge Elimination System (NPDES) monitoring. In addition, the contractor will implement Best Management Practices as necessary and correct any erosion or shoaling causing adverse impacts to water resources. No significant impacts are anticipated to water resources.

AFI 32-7041, *Water Quality Compliance*, identifies essential AF actions to achieve and maintain compliance with the Clean Water Act, and other applicable Federal, State, and local water quality standards. It requires adherence to applicable State and local water quality standards when they are more stringent than Federal standards.

An Environmental Resource Permit (ERP), Potable Water Permit, FDEP Construction General Permit, and Domestic Wastewater Permit will be required. An ERP serves as multi-purpose permit that covers alteration of uplands, Florida Coastal Zone Management and water quality certification requirements (if a Clean Water Act (CWA) Section 404 permit is required for dredge and fill activities). The ERP Program is implemented jointly by U.S. Army Corps of Engineers, FDEP and local water districts. A Notice of Intent for Storm Water Discharges Associated with Construction Activity under a NPDES General Permit will be submitted to FDEP, through the 45 Asset Management/Environmental office. When all construction activities have been completed, a Notice of Termination will be submitted to FDEP through the 45 Asset Management/Environmental office.

Dewatering activities associated with the Proposed Action may require a Consumptive Use Permit per FAC Chapter 40C-2. Consumptive Use Permit regulations have many thresholds, but the three situations that most frequently require permits are:

- The project proposes to withdraw water from a well that measures six inches or more in diameter.
- The project will use or wants to use an annual average of 100,000 gallons of water or more per day.
- The project has the capacity to pump one million gallons of water or more per day.

Effluent from dewatering activities will be discharged to an upland area. The contractor may not discharge to surface waters.



Water and site carrying capacity studies should occur to assess the need for new lift stations and ensure proper site and water resource management. A new lift station is anticipated to be required due to the age of the existing lift station that serves the Proposed Action area.

Stormwater runoff from industrial facilities, parking lots, and roadways is the primary cause of non-point source pollution at PAFB. Existing parking lots near the new facility would be utilized in addition to the construction of approximately 30,000 SM of additional parking lots. Should the stormwater permitting not allow this total amount of impervious surface, a parking garage could be built to minimize stormwater run-off, run-off contaminated with petroleum products (oils and grease) from asphalt surfaces and other hazardous materials/wastes from outdoor storage yards/work areas that discharge to surface waters during an intense rainfall. As such, the Proposed Action provides an opportunity to incorporate runoff treatment measures to help ensure nutrient Total Maximum Daily Loads (TMDLs) is met for the south Banana River Lagoon watersheds. The potential for stormwater non-point source pollution at PAFB is typically minimized by storage of run-off in retention ponds and swales, and BMPs to reduce exposure of potential contaminants to stormwater. The 45 SW is attempting to coordinate with the City of Cocoa Beach to work cooperatively on a regional approach for TMDL implementation. Therefore, no significant impacts are anticipated.

## 3.0 AFFECTED ENVIRONMENT

In compliance with NEPA and CEQ guidelines, this Chapter describes the existing environment of the Proposed Action area for those resources/categories that were not previously eliminated from further analysis (see Chapter 2). This information serves as a baseline from which to identify and evaluate potential environmental changes resulting from implementation of the Proposed Action. This EA is being tiered from the Environmental Assessment for the General Plan and Maintenance of PAFB, FL [Finding of No Significant Impact (FONSI) signed on 26 June 2005) to minimize duplication of effort per 40 CFR 1502.20 and 32 CFR 989.10. Additional baseline data for PAFB can be referenced from the PAFB General Plan EA such as Air Quality, Surface and Groundwater, Soils, Airspace, Native Flora and Fauna, Threatened and Endangered Species, Infrastructure, Land Use, etc. The resources/categories addressed in this Chapter are hazardous materials and waste, health and safety, and T&E sea turtles.

### 3.1 Hazardous Materials and Waste

A material is hazardous when, because of its quantity, concentration, or physical, chemical, or infectious characteristics, it may cause or significantly contribute to an increase in mortality or an increase in serious, irreversible, or temporary incapacitating illness, or pose a substantial present or potential hazard to human health or the environment. Typical hazardous materials include reactive materials such as explosives (materials which would cause overpressures of one pound (lb) per square inch or more), ignitables (materials which burn at 140 °F or more), toxics (such as pesticides), and corrosives (such as battery acid). When improperly stored, transported, or otherwise managed, hazardous materials can significantly affect human health and safety and the environment.

The Resource Conservation and Recovery Act (RCRA) requires “cradle to grave” hazardous waste management, including the regulation of generation, transport, treatment, storage and disposal of hazardous waste. RCRA identifies specific requirements for handling and disposing of hazardous wastes, including solvents commonly used in research laboratories and facilities.

#### Demolition and Construction Activities

As discussed in 2.4.1.1, asbestos is a regulated substance because it is a carcinogen and a designated hazardous air pollutant under the NESHAPs of the CAA. The USEPA issues regulations to ensure compliance with the CAA. ACM is present in Facilities 982, 984 and 989 in various floor tiles/mastic, base molding/mastic, and carpet mastic.

When asbestos poses a health danger from the release of airborne fibers (because it is in a friable state), Air Force policy (AFI 32-1052, *Facility Asbestos Management*) is to remove or isolate it. After demolition, and before a site can be considered environmentally safe for a real estate transaction (subject to the provisions of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)), all friable asbestos will be encapsulated or removed, the site will be approved, and the asbestos waste disposed of in an approved landfill.

Polychlorinated biphenyls (PCBs) are suspected human carcinogens. Improper handling of PCB items or releases of PCBs could have adverse effects on human health and the environment. Liquid PCBs may be present in Facility 989 in electrical equipment such as large high and low voltage switches, capacitors, hydraulic systems, or compressors.

Seven IRP sites are located near Facility 989 (Appendix E). Solid Waste Management Unit (SWMU) P094, AFTAC Sump, is closed and never graduated from "NE Site" status. SWMU P014 is the former site of the Motion Picture Lab, and is a Compliance site with no work on-going. Five other sites have PCB contamination concerns due to former transformers. Confirmation sampling has occurred and remediation is anticipated in 2010. Coordination with the Installation IRP personnel would be required for disturbance of these noted areas to prevent further contamination impacts.

#### Facility Operation Activities

AFI 32-7042, *Solid Waste* (compliance), identifies compliance requirements for all solid and hazardous waste, except radioactive waste. The Nuclear Regulatory Commission (NRC) has granted a Master Material License to the AF for use of radioactive material. Under the license agreement, the AF is given authority to manage radioactive materials generally regulated by the NRC and allows the AF to issue individual permits for use of licensed permitted radioactive material at individual AF installations. As a condition of the Master Materials License, the AF agreed to form a committee chartered to manage and oversee the implementation of AF radioactive material management procedures. The committee is known as the AF Radioisotope Committee (RIC). Management of radioactive material in the AF is governed by AFI 40-201, *Managing Radioactive Materials in the Air Force*. The Proposed Action would utilize small quantities of radioactive material in the laboratory.

The types and forms of hazardous materials utilized in Proposed Action laboratory are anticipated to be similar to those presently used in AF radiological laboratories. Because the AFTAC laboratory is planned to accommodate a variety of different activities, inventories of radiological and chemically hazardous materials may change during operation as the needs of the program evolve. AFTAC will be required to manage radioactive material inventories to quantities lower than applicable radioactive materials inventory limits, such as Nuclear Hazard Category thresholds, air permit limits, and Emergency Planning limits. Chemical inventory limits would be established on the basis of operational needs. These chemical limits are based, in part, on criteria provided in the consensus standards, such as those of the National Fire Protection Association and the International Code Council for the design of facilities containing hazardous materials. Typical hazardous materials used in similar laboratories are provided in Table 3-1.

OSHA Standards 29 CFR 1910.1450, Occupational Exposure to Hazardous Chemicals in Laboratories, and 1910.1200, *Hazard Communication Standard*, require the development of a Chemical Hygiene Plan (CHP), preparation and periodic update of an inventory of all hazardous chemicals, labeling of all containers of hazardous chemicals, availability of Material Safety Data Sheets (MSDSs) for all personnel, and chemical hazard training. The inventories should include full chemical names, storage locations, quantities, and hazard information. Chemicals should be segregated according to chemical classes and compatibility. Physical separation should be provided for reactive chemicals. In addition, flammable and combustible materials should be stored in accordance with applicable standards.

Hazardous wastes will be properly labeled, segregated and stored prior to disposal. Secondary containment will be used for all liquid hazardous wastes and free of spills or contamination. All wastes will be segregated according to hazard class (e.g., corrosive acid, corrosive base, flammable, oxidizer, etc.). All storage containers and lids will be made of a material compatible with the chemical waste contents. All hazardous waste will be disposed of in accordance with federal, state, and local regulations.

**Table 3-1: Typical Hazardous Chemical Inventory for Laboratories**

<b>Flammable:</b>
Gases (e.g., P10 90% Argon/10% Methane)
Solids (e.g., Zinc metal)
Liquids (e.g., alcohols)
Liquefied Gas (e.g., propane)
<b>Oxidizing:</b>
Gases (e.g., oxygen)
Solids (e.g., nitrates)
Liquids (e.g., hydrogen peroxide)
<b>Corrosive:</b>
Gases (e.g., ammonia)
Solids (e.g., silver nitrate)
Liquids (e.g., acids)
<b>Water Reactive:</b>
Solids (e.g., Zinc metal)
Liquids (e.g., Sulfuric acid)
<b>Toxic:</b>
Gases (e.g., nitric oxide)
Solids (e.g., Barium nitrate)
Liquids (e.g., bromine)
<b>Highly Toxic:</b>
Solids (e.g., Methylmercury)
Liquids (e.g., parathion)

### 3.2 Health and Safety

AFI 91-301, *Air Force Occupational and Environmental Safety, Fire Protection, and Health* program summarizes AF requirements for the protection of health and safety. Table 3-2 identifies specific guidance for maintaining health and safety standards during the implementation of the Proposed Action.

**Table 3-2: Summary of Health and Safety Requirements**

Law or Rule	Permit/ Action(s)	Requirement	Agency or Organization
Occupational Safety and Health Standards, 29 CFR 1910  Safety and Health Regulations for Construction, including Subpart T "Demolition", 29 CFR 1926	Various	Protect health and safety of workers	OSHA
Air Force Occupational Safety and Health Standard (AFOSH STD) 48-22, <i>Occupational Exposure to Hazardous Chemicals in Laboratories</i>  AFOSH STD 48-8, <i>Controlling Exposure to Hazardous Materials</i>  AFOSH STD-127-43, <i>Flammable and Combustible Liquids</i>  AFOSH STD 91-68, <i>Chemical Safety</i>  AFOSH STD 91-119, <i>Management of Highly Hazardous Chemicals</i>  AFOSH STD 91-31, <i>Personal Protective Equipment</i>  AFOSH STD 48-21, <i>Hazard Communication</i>	Various	Protection from Exposure to Hazardous Materials	AF

The discussion of human health and safety includes both workers and the general public. Safety issues include injuries or deaths, which are usually the result of one-time accidents. Injuries include impacts on a human that directly result from an exposure to toxic concentrations, radiant heat, or overpressures from accidental releases or explosions (such as flying debris), or accidents resulting from working in confined spaces, and that require medical treatment or hospitalization. Health issues result from activities where people may be impacted over a long period of time rather than immediately.

Health and safety hazards in the laboratory would be minimized through appropriate engineering controls, personal protective equipment, and administrative procedures. All personnel would be properly trained in accordance with regulatory requirements, including 29 CFR 1910.1450 and 29 CFR 1910.1200. A Laboratory Safety Plan would be developed to identify hazards and describe procedures for emergencies, special hazards, and handling hazardous materials.

There are three major routes of entry for a chemical to enter the body: inhalation, skin and eye contact and ingestion. Three types of controls for prevention of these various routes of entry include engineering controls, Personal Protective Equipment (PPE) and administrative controls. To avoid significant inhalation exposure, engineering controls such as ventilation should be used. Chemical fume hoods protect personnel by venting solvent fumes and other harmful gases out of the laboratory and the indoor room air. Air flows into the cabinet beneath a movable sash at the front, and carries fumes up and out through the vent. Bypass fume hoods have an additional air intake above the sash which minimizes disruption of air flow in the work area due to movements in

and out of the hood. Air flow patterns are affected by many factors, including traffic patterns, room make-up air, doorways, room size, hood location, work practices, objects inside the hood, baffle adjustment, and sash opening. These factors should be considered when designing, installing, and using ventilation hoods in the laboratory. Standards of performance for fume hoods are identified in OSHA 29 CFR 1910.145(e)(3)(iii). The use of chemical fume hoods and other local exhaust systems would be required to minimize exposure to hazardous chemicals. For some chemicals, the use of closed systems, vented gas cabinets, failsafe scrubbing, detection or other stricter controls may be required.

The use of PPE may be required to reduce chemical hazard exposure during demolition and facility operational activities. Respiratory protection from dust masks to self-contained breathing apparatus may be utilized during the demolition process. If respirators are worn, requirements of the OSHA Respirator Standard, 29 CFR 1910.139, must be met. Eye protection, face shields, gloves, appropriate shoes, laboratory aprons, laboratory coats, and other protective equipment may be worn to protect personnel from hazards. Administrative controls may also be used to reduce the risk of overexposure to hazardous chemicals. Some examples include:

- Minimization of exposure time for individual personnel;
- Restricted access to an area where a hazardous chemical is used;
- Allowing a process that emanates nuisance odors to be performed only after typical office hours; and
- Proper signage on laboratory doors to indicate special hazards within, a list of supervisors and occupants of the laboratory who should be contacted in the event of an emergency, and appropriate telephone numbers.

The Uniform Fire and Building Codes (UFC/UBC) apply to the storage, dispensing, use, and handling of hazardous materials. These codes regulate the treatment systems for accidental release and continuous monitoring of toxic and highly toxic compressed gases above exempt amounts. The regulations require detailed information regarding spill control drainage, containment, ventilation, emergency power, special controls for hazardous gases, fire prevention, and building height. The facility must have precautions against fire, open flames or burning, fire protection systems, emergency planning, operation and maintenance of equipment, processes and occupancies, and materials handling. Some of these requirements may be met by using control devices that also reduce air emissions. OSHA regulations for laboratories also refer to the "Prudent Practices in the Laboratory" that may reduce air emissions.

All hazardous materials and wastes should be properly segregated and stored by chemical class and compatibility. Oxidizers should be separated from organics, air/water reactives should be kept dry, and cyanides should be stored away from acids. Volatile toxic substances should be stored in volatile storage cabinets adequate to the purpose or in hoods when storage cabinets are unavailable. Bottle carriers should be used for transporting chemicals which are in glass containers. Caps should be securely closed and chemical containers should be stored in areas of easy access. Metal containers and nonconductive containers (e.g., glass or plastic) holding more than five (5) gallons should be grounded when transferring flammable liquids. Cylinders (compressed gases) should be stored in well-ventilated areas with their protective caps screwed on and the cylinder secured (e.g., strapped or chained down). Flammables should be stored

away from oxidizers. Empty and full cylinders should not be stored together. All hazardous chemicals and wastes should be properly labeled and legible. All secondary containers should also be labeled with the chemical name and appropriate hazard class. Hazardous waste should be stored in an appropriately sized waste container and disposed within six months of the accumulation start date. All hazardous waste containers should be properly tagged and segregated as appropriate to maintain a safe environment.

### **3.3 Biological Resources**

No Federal-listed T&E plant species have been identified at PAFB. Protected T&E sea turtles are found on the beaches and Atlantic Ocean waters east of the facility siting, and could be impacted from the artificial light generated by the Proposed Action facility. Sea turtle nesting season along Brevard County coasts occurs each year primarily from May 1st through October 31st. During this time, construction activities are avoided on the beach in order to protect habitat for nesting and hatching sea turtles. PAFB generally has approximately 800-1,100 sea turtle nests per year. After a 45–70 day gestation period, hatchlings emerge from the nest under the cover of darkness and follow the light of the moon reflecting off the ocean.

Once turtle nesting season begins on May 1st, the entire Brevard County coast from Port Canaveral to Sebastian Inlet is monitored daily until turtle nesting season ends on October 31st. The USFWS requires consultation prior to the initiation of any (Federal) construction activities that may impact threatened and endangered species in accordance with Section 7 of the Endangered Species Act. A Light Management Plan in conjunction with the lighting design (and photometrics) would need to be reviewed and approved by 45 Asset Management/Environmental and USFWS per the Biological Opinion issued to the 45 SW for light management under the Endangered Species Act.

## 4.0 ENVIRONMENTAL CONSEQUENCES

This Chapter describes the potential environmental impacts associated with the activities under the Proposed Action and the No Action Alternative for the Proposed Action. Components of the affected environment that are of greater concern are described in greater detail.

Federal, State, and local environmental laws and regulations were reviewed to assist in determining established thresholds for assessing environmental impacts (if any) in fulfillment of NEPA requirements. Proposed activities were evaluated to determine their potential to result in significant environmental consequences using an approach based on the interpretation of significance outlined in the CEQ regulations for implementing the procedural provisions of NEPA (40 CFR 1500-1508) and 32 CFR 989, *The Environmental Impact Analysis Process* (2003).

Guidelines established by the CEQ (40 CFR 1508.27) specify that significance should be determined in relationship to both context and intensity (severity). The assessment of potential impacts and the determination of their significance are based on the requirements in 40 CFR 1508.27. As discussed in Chapter 2, three levels of impact can be identified:

- No Impact
- Not Significant
- Significant Impact

Factors contributing to the intensity or severity of the impact include the following:

- The degree to which the action affects public health or safety;
- Unique characteristics of the geographic area such as proximity to cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas;
- The degree to which effects of the action on the quality of the human environment are likely to be highly uncertain or controversial;
- The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration
- Whether the action is related to other actions with individually insignificant, but cumulatively significant impacts;
- The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed or eligible for listing on the National Register of Historic Places (NRHP), or may cause loss or destruction of significant scientific or cultural resources;
- The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the ESA; and



- Whether the action threatens to violate a federal, state, or local law or requirements imposed for environmental protection.

Thresholds for determining impact significance are based on the applicable compliance standard. When feasible, these criteria correspond to federal- or state-recognized criteria, and are determined using the associated standardized methods. In the absence of a compliance standard, the thresholds are based upon a federal- or state-recommended guidance or professional standards/best professional judgment.

## **4.1 Hazardous Materials and Waste**

### **Demolition and Construction Activities**

Hazardous materials typically associated with construction activities, such as lubricants and fuels, would be used during the Proposed Action. Any hazardous waste would be identified, removed, and disposed of in accordance with current regulations. Although not anticipated, any additional hazardous materials/waste generated due to the implementation of the Proposed Action would be identified and removed in accordance with existing regulations. Notification to FDEP will be required 10 days prior to demolition of any load-bearing structure regardless of if asbestos is present or not.

The selected demolition contractor would ensure all universal waste lamps are carefully handled and packaged to avoid breakage in preparation for recycling. Disposal of fluorescent lamps, High Intensity Discharge (HID) lamps, and low-pressure sodium lamps will be in accordance with OPLAN 19-14. These lamps would be delivered to the universal waste site at Facility 1708 on CCAFS.

During the demolition of Facilities 982, 984 and 989, liquid polychlorinated biphenyls (PCBs) may be present in electrical equipment such as large high and low voltage switches, capacitors, hydraulic systems, or compressors. If equipment of this nature exists, it should be sampled for PCBs prior to disposal. All electrical equipment containing dielectric fluid will have fluids sampled within six months of disposal. All items that contain PCB levels greater than or equal to 50 ppm will be handled in accordance with 40 CFR 761 and 45 SW OPLAN 19-16. This equipment will be turned into the AF.

Prior to 1983, PCBs were used in non-liquid applications such as caulk, sealants, paints, etc. If through documentation or prior knowledge, there is reason to believe that such materials are present in the facilities to be demolished, the 45 Asset Management/Environmental office will be notified and guidance will be provided.

Venting of ODCs into the atmosphere is prohibited. ODCs will be recovered and recycled prior to excising ODC containing equipment. ODC recovery operations will be performed by trained technicians using USEPA approved recovery equipment. Excised ODC equipment will be disposed of properly. New units will use non-Class I ODC substances such as R22, R123, R134a, or ammonia as the refrigerant. New units utilizing R-11 or R-12 are not to be purchased (Engineering Technical Letter 91-7, CFC Limitation in HVAC Systems).

### **Facility Operation Activities**

Hazardous material (HAZMAT) authorization will be in accordance with AFI 32-7086, *Hazardous Materials Management*. During construction, contractors will submit required supporting documentation, including a manufacturer specific Material Safety Data Sheet

(MSDS) and estimated quantities for the work as required. All HAZMAT to be used in this contract will be approved through the electronic AF HAZMAT authorization/tracking system (EESOH-MIS) prior to being transported onto the base.

A listing of hazardous chemical inventories will be prepared for AFTAC operational activities. The listing was limited to chemicals associated with current programs and projects that may transition to the new AFTAC facility or which are consistent with the planned capability and mission of AFTAC. The review identified a broad variety of chemicals that may be used in AFTAC laboratory operations, although typical quantities in use or present in an individual laboratory at any given time are anticipated to be relatively small based on current usage and laboratory practices. The types and quantities of chemicals present in the facility and their usage rates are expected to vary over time according to programmatic needs. However, the quantities of hazardous chemicals present in the AFTAC facility would be managed within applicable limits specified by the applicable International Building Code. The hazardous material storage and handling facility would meet the requirements for proper storage and handling per 40 CFR 260-279 and 45SW OPLAN 19-14, *Waste Petroleum Products and Hazardous Waste Management Plan*.

Specific hazardous materials that AFTAC laboratory operations will require include the use of mineral acids, organic solvents, and basic reagents, similar to chemicals commonly in use in typical laboratory settings. Additionally, the laboratory will process samples containing quantities of radioactive materials; periodically up to Curie levels. A Hazard Communication Program (HAZCOM) and CHP will be in place to minimize the incidence of chemically induced occupational illnesses and injuries in the workplace by establishing guidance for training employees on the health and physical hazards associated with, and proper preventive measures to be taken when, using or handling hazardous chemicals in the laboratory. The HAZCOM program will ensure personnel are trained on the types of hazardous materials in their work area at the time of their initial assignment and prior to potential exposure to hazardous materials.

The CHP will be a site-specific document written to provide the employee with explicit requirements for daily activities within the AFTAC laboratory. This document will include guidance on general safe work practices for the chemicals and safe handling of hazardous materials routinely used in the AFTAC laboratory, use of appropriate personal protective equipment, and emergency procedures. The CHP also includes standard operating procedures which detail receipt, transport, storage, use and disposal of all hazardous materials in use in the AFTAC laboratory. All appropriate storage and handling procedures will be followed in the laboratory in accordance with 29 CFR 1910.1450 and 29 CFR 1910.1200, and with applicable federal, state, and local regulations and permit conditions as specified by the AF Radioisotope Committee. All chemicals and other hazardous materials will be stored properly to prevent spills, uncontrolled reactions and to minimize worker exposure. All hazardous materials containers will be properly labeled and inventoried, and MSDSs available. Radioactive materials will require additional security controls such as locked storage, documented inventory so unauthorized removal can be detected, and locking laboratories when not occupied.

Solid waste will be managed in accordance with the instructions set forth in the specifications of the contract. The types of waste anticipated to be generated would include low-level radioactive waste, mixed (hazardous and radioactive) low-level waste, and hazardous (non-radioactive) waste, in addition to the non-hazardous solid wastes typically

associated with operation of any industrial or laboratory facility. Hazardous waste management is integral to the protection of the personnel inside and outside of the laboratory, as well as for the protection of the local community's air, soil, and water systems. All operations within the AFTAC laboratory will be governed by standard operating procedures, which conform to all federal, state, and local regulations. Laboratory operations will generate liquid and solid waste. Based on historical data from AFTAC laboratories, the generation of wastes will be less than seventy-two 55-gallon barrels annually. All wastes will be controlled and disposed of in accordance with federal, state, AF, and local regulations.

The contractor will be responsible for sampling all wastes to determine whether they are hazardous or non-hazardous. Results of laboratory analyses will be provided to the Contracting Officer. All containers utilized for the management of wastes will be new and meet the Department of Transportation's performance-oriented packaging requirements. All containers will be labeled to accurately reflect the contents. Refer to OPLAN 19-14 for specific information. The contractor will assume all liabilities for improper waste disposal. All AF hazardous waste is to remain on base and will be shipped off-site by the AF under an USEPA identification number. Management of hazardous waste will be in accordance with 40 CFR 260-279. Locations of accumulation sites shall be approved by 45 Asset Management/Environmental prior to generating hazardous waste. Off-site disposal of solid non-hazardous waste lies with the contractor.

Hazardous waste will be properly labeled, separated by hazard class and stored for disposal. All hazardous waste containers designated for liquid storage will have appropriate secondary containment to prevent an uncontrolled release in the event of a breakage. The generation of small amounts of radioactive wastes would be managed in accordance with applicable standards with an emphasis on waste minimization and pollution prevention. It is Air Force policy that all human exposures to ionizing radiation be As-Low-As-Reasonably-Achievable (ALARA). There should be no exposure to ionizing radiation without an expected benefit and any dose received should be the lowest possible, consistent with technology, cost, and operational requirements. Disposal of licensed and non-exempt radioactive materials is governed by 10 CFR 20, Subpart K, *Waste Disposal*, and AFI 40-201. The degree of waste management rules required is dependent upon local conditions including quantity and type of waste produced, where the waste is generated, and location and configuration of available storage. A permit will be obtained for radioactive waste storage areas used for Byproduct, Source, or Special Nuclear material and non-exempt quantities of Naturally Occurring and Accelerator Produced Radioactive Material wastes. No significant impacts are anticipated.

## **4.2 Health and Safety**

Common safety hazards associated with heavy equipment operation and construction and demolition activities would exist. All appropriate regulations, including OSHA regulation 29 CFR 1926, *Safety and Health Regulations for Construction*, would be followed during project activities to minimize potential impacts.

ACM surveys for Facilities 982, 984 and 989 indicate various 9"x 9" and 12"x 12" floor tile/mastic, base molding/mastic, and carpet mastic contain ACM. If other materials are suspect, testing will occur for disposal characterization. A pre-demolition ACM survey will be

completed and ACM will be abated before demolition. Project designs for demolition of all facilities constructed prior to 1981 will fully address the NESHAP requirements for asbestos (40 CFR 61 Subpart M). Complete survey records are available in Facility 534, 2nd floor, 45 Asset Management/Environmental.

Limited heavy metal paint records exist for Facilities 982, 984 and 989. Testing should occur for disposal characterization. Activities involving painting and/or paint removal will be performed in accordance with FDEP, USEPA, OSHA, and HUD requirements for heavy metal and particulate matter emissions and heavy metal paint debris disposal. Materials/coatings containing heavy metals should be left in place if possible and not disturbed. Paint removal and disposal of hazardous paint debris will be in accordance with 45 SW OPLAN 19-14 and RCRA. Large sized pieces of Construction and Demolition (C&D) debris with intact heavy metal paints shall be stored in covered containers until ready for disposal in a Class I or III landfill or a C&D disposal facility. The contractor will be responsible for sampling other generated waste stream (rinse water, chips, etc.) to determine if it is hazardous. Results of laboratory analyses will be made available to the AF.

Specific safety precautions would be incorporated into the design of the facility. Appropriate site lighting, building access areas and pedestrian walkways would be installed for safety purposes. The new AFTAC facility would be compliant with the DoD Minimum Antiterrorism Standards for Buildings and would minimize antiterrorism vulnerabilities that are found at the current location. The considerations taken in the design and layout of the new AFTAC facility would provide appropriate and enforceable measures to establish a level of protection against terrorist attacks, even though there is no known threat of terrorist activity at the current location. These standards are mandatory for all new construction projects.

Laboratory processes, storage and handling will be coordinated with 45 SW units of Bioenvironmental, Wing Safety, Medical, and Environmental Hazardous Material Management to ensure all guidelines for occupational health, safety, bio-hazardous and hazardous materials are followed. The hazardous materials will be segregated from the hazardous waste in the storage facility.

Procedures will be developed by the base Radiation Safety Officer (RSO) in conjunction with the permit RSO, if applicable, to secure waste radioactive material from unauthorized persons. Radioactive waste generating activities will:

- Secure laboratories or rooms where radioactive wastes are generated or stored;
- Use a bound log book with consecutively numbered pages to document information on waste generation and radiation levels including items listed in AFI 40-201.
- Survey waste containers at least weekly; and
- The permit RSO will check log books, visually inspect containers, survey the container with radiation instrumentation, and seal the container prior to packaging waste for shipment to a disposal site.

Routine radiological, chemical and other operational effluents resulting from laboratory operations are anticipated to have no discernable impact on human health. Appropriate

engineering, PPE, and administrative controls such as ventilation fume hoods, eye protection and gloves, and minimizing exposure time would be used to minimize the risk of overexposure to hazardous chemicals. The radioactive isotopes used in miniscule amounts as tracers in the laboratory processes are anticipated to have no significant impact on health and safety.

Chapter 2 of AFI 32-4002, *Hazardous Material Emergency Planning and Response Program*, 1 December 1997, outlines the Emergency Planning and Community Right to Know Act (EPCRA) roles and responsibilities for AF activities in conformance with EO 12856, *Federal Compliance with Right-to-Know Laws and Pollution Prevention Requirements*. AFI 32-4002 provides the framework for development, coordination, control, and directions of all emergency planning, preparedness, readiness assurance, response, and recovery actions. In compliance with AFI 32-4002, AFTAC will provide facility-specific emergency plans in accordance with state and federal regulations to protect workers, public health and safety, and the environment in the event of an emergency affecting AFTAC. AFTAC staff members would participate in regularly scheduled exercises to train emergency personnel who would respond to potential accidents and other events. Emergency services for AFTAC-occupied facilities are provided by the PAFB Fire Department.

Provisions in the facility emergency plans would require that a hazards survey be performed, and the hazards survey would be used to identify any requirement for the preparation of an Emergency Preparedness Hazards Assessment (EPHA). The EPHA would describe the hazards associated with operations and materials in the facility and evaluate the consequences of events that might present a risk to health and safety of workers or members of the public. Events considered in the EPHA would include internal accidents or process upsets, external events, natural phenomena, and other events, such as sabotage or intentional destructive acts. In addition, building emergency procedures would address actions that would be taken to evaluate the severity of an actual or potential emergency and the steps necessary to notify other agencies and coordinate the response. The EPHA would also provide for the establishment of Emergency Planning Zones, where warranted, and specify Emergency Action Levels at which the hazard to workers and the public is of sufficient concern that protective action should be taken.

Emergency procedures would be reviewed annually and updated as needed when changes to operations could affect the level of risk associated with the facility. The building emergency procedures would describe types of hazards and operations associated with the facility as well as any administrative controls or engineered systems in place to mitigate the consequences of accidents or other off-normal events. Those controls would be commensurate with the level of risk associated with facility operations.

AFTAC personnel would ensure AF assets are appropriately protected from malevolent acts such as theft, diversion, and sabotage, as well as events such as natural disasters and civil disorder, by considering site and regional threats, protection planning strategies, and protection measures. Public access to the perimeter of the AFTAC Site and buffer area would be limited through the installation of a fence, wall, or other barrier that meets safeguards, security, and facility safety requirements. Based on threat assessments and protection planning strategies, the AFTAC facility would be designed to provide the appropriate level of physical protection required by DoD for Property Protection Areas (PPAs) and Limited Areas (LAs). PPAs would be established where required to protect

government-owned property against damage, theft, or intentional destructive acts. LAs are security areas designated for the protection of classified matter and certain types of special nuclear material.

Anticipated impacts of routine operations at the AFTAC laboratory on the health and safety of both workers and the public for radiological exposures and for routine activities are not anticipated to be significant. Work is performed in laboratories designed for safe use of chemicals, including equipment such as ventilation-controlled fume hoods and worker protective clothing. It is anticipated that impacts on workers and public health from the release of chemicals from routine operations would be minimal.

In addition to Security and Ground Safety, Flight Safety will need to evaluate designs for the Proposed Action site to ensure height and clear zone criteria are met before final site plan approvals. Current building height restrictions allow 1 foot of building height for every 50 feet the facility is located from the runway (50:1 ratio).

No significant impacts are anticipated to health and safety.

#### **4.3 Biological Resources**

To minimize any impacts to T&E sea turtles from artificial lighting, the Proposed Action will conduct project activities outside of dark hours during the sea turtle nesting season (1 May – 31 October). No utilization of exterior construction lighting from dawn to dusk during this same time frame would be authorized unless a specific construction lighting management plan is approved by USFWS. Likewise, to reduce adverse impacts to sea turtles, all exterior lighting proposed for this project will be in accordance with the 45th SWI 32-7001, *Exterior Lighting Management*, dated 26 Jan 08. Bollard, shoebox and downward-directed lighting will be required in the lighting design. All lighting will be shielded from direct visibility of the beach to include interior lighting producing exterior glow. Windows will be tinted to 45% light transmittance or less, and window treatments will be utilized to block interior lighting visible to the exterior. No significant impacts are anticipated.

#### **4.4 No Action Alternative**

Under the No Action Alternative, continued safety, health and environmental problems plaguing this aging facility will cripple the development of verification technology for future treaties involving nuclear weapons programs. The proximity to a major thoroughfare and water body will continue to expose this critical facility with its cutting-edge technological laboratories and uniquely qualified personnel to risks from man-made and natural hazards. The inadequate facility risks serious impact to nuclear treaty monitoring operations and operations support.

#### **4.5 Conflicts with Federal, State, or Local Land Use Plans, Policies, and Controls**

The Proposed Action alternatives would have no impact on existing land use and presents no conflicts with Federal, regional, state, or local land use plans, policies, or controls.

#### **4.6 Energy Requirements and Conservation Potential**

Federal agencies are required to reduce energy consumption by 2% each year under the Energy Policy Act (Public Law 109-58, Aug 8, 2005). Projects will incorporate energy efficient appliances and products identified under the Energy Star labeling or designated under the Federal Energy Management Program (FEMP) of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency unless it is not cost-effective over the life of the product taking energy cost savings into account or there are no products that meet the functional requirements of the agency.

Per the National Energy Conservation Policy Act, sustainable design principles and life-cycle cost-effective technologies will be applied to siting, design, and construction of all new and replacement buildings.

EO 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*, requires improved energy efficiency and reduced greenhouse gas emission through an annual 3% reduction in energy consumption, and an annual 2% reduction in water consumption. The proposed AFTAC facility would have a LEED certification of silver. The LEED certification will permit greater energy efficiencies and resource conservation.

The recyclable content of the demolition debris should be of a fairly high percentage to allow substantial landfill diversion rates.

Existing energy sources are considered adequate to meet the requirements of the Proposed Action.

#### **4.7 Natural or Depletable Resource Requirements and Conservation Potential**

Other than the use of vehicle fuels for demolition and construction activities, the Proposed Action requires no significant use of natural or depletable resources.

#### **4.8 Irreversible or Irretrievable Commitment of Resources**

Although the Proposed Action would result in some irreversible and irretrievable commitment of resources such as fuel and labor, this commitment of resources is not significantly different from that necessary for regular activities taking place on the Installation in general.

#### **4.9 Adverse Environmental Effects that Cannot be Avoided**

Adverse environmental effects from the Proposed Action that cannot be avoided include construction-related emissions of fugitive dust and exhaust products (greenhouse gases); temporary displacement of wildlife during construction due to noise and construction activities; some destruction of existing vegetation; and sediment runoff into surrounding areas during construction activities. However, through implementation of the program actions and measures described within this document, these effects are anticipated to have a less than significant impact on environmental resources.

#### **4.10 Relationship Between Short-Term Uses of the Human Environment and the Maintenance and Enhancement of Long-Term Productivity**

The Proposed Action would demolish the “B” and “C” wings of Facility 989 and Facilities 982 and 984, and construct a new AFTAC facility. This action would not eliminate any options for future use of the area. If Force Protection requirements limit the development of the site of Facility 989 if wings “B” and “C” are demolished, then the area could be developed into “green space” and planted with native vegetation and limited turf to provide wildlife habitat and reduce mowing requirements.

#### **4.11 Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations**

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*, requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of their programs, policies, and activities on minority and low-income populations. Environmental Justice analysis need be applied only to adverse environmental impacts (USAF, 1997). Based on preliminary guidance provided by the Federal Interagency Working Group on Environmental Justice, adverse may be defined as “having a deleterious effect on human health or the environment that is significant, unacceptable, or above generally accepted norms.” Adverse human health effects include bodily impairment, infirmity, illness, or death. Adverse environmental effects may include ecological, cultural, human health, economic, or social impacts when interrelated to impacts on the natural or physical environment.

The Proposed Action area is not located adjacent to minority populations or low-income population centers, and indirect impacts to such communities located in the surrounding areas were not identified during the analysis of the Proposed Action. Census data for Brevard County and surrounding counties is provided in Table 4-1. The new AFTAC facility will not produce excessive pollution or create a hazardous situation that would affect the surrounding community, regardless of economic background. Therefore, it is concluded that the Proposed Action would not result in disproportionately high or adverse human health or environmental effects on minority or low-income populations. The Proposed Action alternatives would not substantially affect human health or the environment and would not exclude persons from participation, deny persons the benefits, or subject persons to discrimination because of their race, color, or national origin. In accordance with EO 12898, the public will have the opportunity to review this EA and comment on its actions accordingly.



**Table 4-1: Census Data Comparison for Brevard and Surrounding Counties (2007)**

<b>Statistics (%)</b>	<b>Brevard</b>	<b>Indian River</b>	<b>Orange</b>	<b>Osceola</b>	<b>Volusia</b>
White persons	85.9	88.9	72.3	82.8	86.5
Black persons	10.0	8.8	20.8	11.3	10.5
American Indian and Alaska Native persons	0.4	0.3	0.5	0.7	0.4
Asian persons	2.0	1.0	4.4	3.2	1.5
Native Hawaiian and other Pacific Islander persons	0.1	0.0	0.2	0.2	0.0
Hispanics or Latino origin persons <sup>1</sup>	6.9	9.8	24.3	40.5	10.3
Persons below poverty	8.6	9.7	11.6	11.2	14.1

<sup>1</sup>Hispanics may be of any race and are also included in applicable race categories.

Source: U.S. Census Bureau, [www.census.gov](http://www.census.gov)

## 4.12 Cumulative Impacts Summary

Cumulative impact as shown in 40 CFR 1508.7 is "...the impact on the environment which results from the incremental impact of the action when added to other past, present, or reasonably foreseeable future actions, regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time."

Potential cumulative impacts of the proposed project activities are evaluated by determining (1) whether the Proposed Action would have an impact on a given resource and (2) what is the incremental impact of the Proposed Action when added to other past, present, and reasonably foreseeable future actions.

The Proposed Action area has been previously disturbed. Because similar activities and functions have and will continue to occur in the area, no significant changes in impacts are anticipated. The cumulative impacts that may occur as a result of the construction and operation of the new AFTAC facility will include greenhouse gas emissions, increased lighting in the area and a potential for minor amounts of increased traffic on State Road AIA with increase in personnel. Additionally, improved retention/stormwater treatment will be achieved through the newly designed system which should aid in compliance with TMDL requirements to minimize stormwater release to the Banana River. The energy controls incorporated in the new facility should reduce energy consumption compared to the existing building that is greater than 50 years old and has limited energy conserving renovations. The new facility should ensure that the 24-hour usage areas are centralized so that the entire facility isn't utilizing energy when only certain locations are essential for "round the

clock” mission requirements. The future impacts combined with the past and present impacts from the area are not anticipated to result in any significant cumulative impacts.

Cumulative contributions of non-recyclable construction debris to the CCAFS and Brevard County landfill would occur from Building 989, 984 and 982. However, this debris would not be considered a significant impact to landfill capacity. No significant cumulative impacts are anticipated to significantly impact human health or the environment if designs are wisely developed and coordinated with all appropriate external and internal agencies.

## 5.0 Conclusion

The AF conducted an assessment of the potential environmental consequences of constructing a new AFTAC facility and demolishing the “B” and “C” wings of the current building (Facility 989) and Facilities 984 and 982. This action is being proposed in order to construct a new facility that is adequately sized, configured, and appropriately located PAFB that will meet Force Protection requirements, be able to endure low Category 4 storms and surge, support an increase in personnel, and sustain the AFTAC mission in nuclear event detection and verification technology. To meet the long-term mission needs, AFTAC needs replacement administrative space for the current AFTAC facility (Facility 989) at PAFB, which is over 50 years old. The current building poses excessive safety, health, and mechanical deficiencies as well as anti-terrorism/force protection issues. In addition to the administrative facility, AFTAC requires a laboratory to replace one which was closed due to the Base Realignment Closure Act of 1995. This new laboratory will ensure a robust laboratory system is available to meet national security requirements. The only alternative considered to the Proposed Action was the No Action Alternative, in which the current facility would not provide sufficient space allocation and adequate amenities without substantial upgrades, and is therefore not preferred.

No significant environmental impacts were identified that would require the completion of an Environmental Impact Statement. However, some less than significant impacts were identified and are summarized below in Table 5-1, along with minimization measures and applicable regulatory guidance.

The 45 SW Asset Management/Environmental will be notified of all future designs, pre-construction, construction and post-construction meetings to monitor compliance with environmental stipulations.

**Table 5-1: Environmental Assessment Summary Matrix**

<b>Resource Category</b>	<b>Potential/Known Impact(s)</b>	<b>Impact Minimization Measure(s) and Applicable Guidance</b>
Air Quality	Short term impacts to air quality from particulate matter, CO, SO <sub>2</sub> and NO <sub>x</sub>  Potential releases of Ozone Depleting Substance (ODS)	Periodically water construction site and restrict vehicle speeds for dust control. Properly remove ODS.
Biological Resources	Potential disturbance of birds protected by the MBTA and ESA  Artificial lighting impacts to sea turtles	Where possible, avoid work during nesting season in areas where nests are found. Relocate nests/eggs in accordance with the Federal Depredation Permit.  Coordination with USFWS for AFTAC Facility Light Management Plan and compliance with 45 SWI 32-7001
Cultural Resources	Degradation of archeological resources	Cease project activities if human remains are unearthed and notify archeologist if artifacts are found.

Geology, Soils, and Water Resources	Soil erosion, siltation and pollution of surface waters	Obtain and comply with stormwater NPDES permit for activities that disturb 1 acre or more; implement BMPs.
Hazardous Materials and Waste	<p>Potential Disturbance of areas contaminated with hazardous substances resulting in greater dispersal of contaminants</p> <p>Hazardous Materials usage; Exposure to LBP, ACM, and PCBs</p> <p>Disposal of Hazardous Wastes</p>	<p>Coordinate with Installation IRP office</p> <p>Develop HMMP and CHP; Implement BMPs for LBP and PCBs; Submit Asbestos Abatement Plan</p> <p>Dispose hazardous wastes in accordance with AF OPLAN 19-14.</p>
Health and Safety	<p>Worker Safety Issues</p> <p>Safety issues regarding handling, transporting, and disposing of hazardous materials and wastes (PCBs, asbestos, LBP, fuel, etc.)</p> <p>Chemical handling and venting of lab emissions</p> <p>Building height restrictions for flight safety</p>	<p>Prepare Safety Plan, CHP, HAZCOM</p> <p>Submit building plans to Security and Ground Safety, Flight Safety for approval</p>
Infrastructure and Transportation	<p>Potential damage to underground utilities from heavy equipment</p> <p>Impacts to landfills from demolition debris</p> <p>Impacts to SR AIA traffic flow or FDOT facilities</p>	<p>Obtain dig permit prior to ground disturbance.</p> <p>Recycle wood, metals, concrete, and other materials whenever possible.</p> <p>Coordination with Florida Department Of Transportation and obtain required FDOT permits</p>
Land Use and Zoning	CZMA compliance	Project subject to Federal consistency review and determination.
Noise	Short-term noise impacts to workers and surrounding personnel	Use administrative or engineering controls and PPE where necessary.

## 6.0 DOCUMENTATION CITED

- 32 CFR 989, 2003. *Environmental Impact Analysis Process (EIAP)*. Headquarters AF. Washington D.C.
- AFI 32-7064, 2004. *Integrated Natural Resources Management*, Headquarters AF. Washington D.C., 17 Sept.
- Department of Defense, 2003. *Unified Facilities Criteria, DoD Minimum Antiterrorism Standards for Buildings*, 8 October.
- Endangered Species Act, 1973. Pub. L. No.93-205, 81 Stat. 884 (Dec. 28, 1973) (current version at 16 USC. 1531-1543 (1982)).
- Executive Order 13112, 1999. *Invasive Species*.
- Executive Order 11990, 1977. *Protection of Wetlands*.
- Executive Order 11988, 1977. *Floodplain Management*.
- United States Air Force (USAF), 2004. *Invasive Plant Species Control Plan for PAFB*, 2004
- USAF, 2009. *Integrated Natural Resources Management Plan*, Cape Canaveral Air Force Station, Florida. U.S. Air Force, 45th Space Wing. Cape Canaveral Air Force Station, FL.
- USAF, 2005. *Environmental Assessment for the General Plan and Maintenance of Patrick AFB*, FL., May 2005
- U.S. Army, 1994. *Historical and Architectural Documentation Reports of Patrick Air Force Base, Cocoa Beach, Florida*. U.S. Army Construction Engineering Research Laboratory, Tri-Services, Cultural Resource Research Center, Champaign, Illinois
- United States Department of Energy, 2007. *Environmental Assessment of the Construction and Operation of a Physical Sciences Facility at the Pacific Northwest National Laboratory, Richland, Washington*, January.
- United States Environmental Protection Agency (USEPA), 1971. *Noise from Construction Equipment and Operations*, Building Equipment, and Home Appliances, NJID, 300 1, December 31, 1971.

## 7.0 LIST OF PREPARERS

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**APPENDIX A**  
**REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS**  
**AF FORM 813**

REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS		Report Control Symbol RCA SXHT 05-3001		
<b>INSTRUCTIONS:</b> Section I to be completed by Proponent. Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).				
<b>SECTION I - PROPOSER INFORMATION</b>				
1. TO (Environmental Planning Function) 2. FROM (Proponent Organization and functional address symbol) 4c CFS/CEV USAF/PC				
3. TITLE OF PROPOSED ACTION: SXHT 05-3001, Doodown of Air Force Technical Application Center (AFTAC) and Construction of New Facility, PAFB FL				
4. PURPOSE AND NEED FOR ACTION (Identify decisions to be made and need date) To Doodown AFTAC and construct a building that is adequately sized, configured and appropriately located at PAFB that will meet Force Protection requirements; support an increase in personnel, and sustain the AFTAC mission in nuclear event detection and verification technology. Need date: FY 2008.				
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (Provide sufficient details for evaluation of the total action.) A multi-story facility of approximately 20,225 square meters with concrete pier foundation, reinforced concrete floor slab and walls is being proposed to induce structural steel frame and roof system, computer access flooring, fire protection environmental controls, Sensitive Compartmented Information Facility, Intrusion Detection System, Uninterruptible Power Supply support, space allocation for clean rooms, security center, data processing center, mail room, vaults, storage, equipment repair/maintenance, and redundant electrical power and communication system. The building and site must meet Force Protection (FP) requirements, have space for approximately 1,000 occupants, and provide adequate parking. Demolition of storage magazines (Facilities 1327 and 1330) and reconfiguring of a drainage ditch along the western boundary of the new AFTAC site may be required for parking configuration. Demolition of 95E is not being pursued under this MILCON because of cost and AFTAC interfering for the new facility. Proposed was Staff Facility 008.				
6. PROPOSER APPROVAL (Name and Title) [Signature]		7. DATE 4/3/06		
<b>SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY.</b> (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect, 0 = no effect, - = adverse effect, U = unknown effect.)				
1. AIR QUALITY (Ambient air quality, use of Class 2 use, provide, significant national, environment, air)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. ACOUSTICITY (Ambient sound level, status, style implementation plan, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. WATER RESOURCES (Quantity, quality, source, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. SAFETY AND OCCUPATIONAL HEALTH (Ambient radiation, chemical, biological, explosives safety, quantity, distance, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. ECONOMIC & MATERIAL WASTE (Subsidence, generation, solid waste, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6. BIOLOGICAL RESOURCES (Wetlands, riparian, flora, fauna, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8. GEOLOGY AND SOILS (Topography, channels, geologic, mineral resources, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. SOCIOECONOMIC (Employment, population projections, cultural and local fiscal impacts, etc.)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. OTHER (Persons/visitors not addressed above.) Traffic Base Congestion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<b>SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION</b>				
11. PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) <input checked="" type="checkbox"/> PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX. FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.				
12. REASON The proposed project has the potential to impact PAFB attributes and does not qualify for a Categorical Exclusion (CATEX), as defined in 32 CFR 989, Appendix 3. Further environmental analysis is required (e.g. Environmental Assessment). The 4b CFS/CEV must be notified of all future design and construction meetings to ensure compliance with environmental stipulations. (cont'd Page 2)				
13. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION Name and Title: [Signature]		14. SIGNATURE [Signature]		
Chief, Environmental Flight		DATE 7/5/06		

AF FORM 813, AUG 93 (EPA-11) (28 Nov 97 form)

THIS FORM CONSOLIDATES AF FORMS 813 AND 814. PREVIOUS EDITIONS OF BOTH FORMS ARE OBSOLETE.

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#### 5. Description of Proposed Action and Alternatives

An increase in personnel is projected at 100-150 in a five-year span with a space requirement for approximately 1,000. Approximately 30,000 sq ft of additional area will be required for parking surrounding the 23,225 SM facility. Stormwater treatment basins will also need to be factored into the facility design.

ADDITIONAL SCOPE (July 2006): A new DD Form 1391 was developed that has included demolition of "B" and "C" Wings of Facility 989.

Alternatives: Alternative 1: Repair/renovate existing Facility 989 and vacate Range Support personnel from "A" Wing for AFTAC- Facility 989 was built in 1957 and has become a maintenance burden with continual work orders to repair HVAC, elevators, windows, and remove mold/mildew. Improper masonry mortar and steel wall reinforcement has compromised wall strength. Although providing "A" Wing of 989 for AFTAC use would afford space needed for new personnel (about 300 projected through 2010), the repairs or complete reconstruction to bring the facility to minimum design and anti-terrorism standards is cost prohibitive. Likewise, facility 989 is critically out of step with the Anti-terrorism/Force Protection (AT/FP) requirements with proximity to State Road A1A and the Atlantic Ocean. This alternative is not preferred.

Alternative 2: Provide space in existing facilities on base- Several facilities have small areas that could be utilized (example 3rd floor of 423) by AFTAC, however there are no areas that are large enough to support the mission and allow cohesiveness of personnel. This alternative is not preferred. Alternative 3: Construct new facility- This is the preferred alternative to provide adequate space and modern infrastructure to perform the AFTAC mission. No action- Sufficient space allocation or a new facility is required as Facility 989 is not adequate for the AFTAC mission. The no action alternative is not preferred.

#### 18. Remarks

Green Purchasing/Pollution Prevention- Per Executive Order 13101 and Federal Acquisition Regulations, maximize the purchase of materials containing recycled materials content found on the list of "EPA Designated Guideline Items" at (<http://www.ofee.gov/eo13101/13101.htm>). Prior to project closeout, a report that describes the materials and quantities specified/used, or justification as to why designated guideline items were not utilized will be provided to Wayne Neville (494-9268).

The Pollution Prevention Act of 1990, 42 U.S.C. §13101(b), established a National policy to prevent or reduce pollution at the source. The environmental implications of all projects will be considered during the design phase, designs should minimize or eliminate environmental liability, and a pollution prevention environmental analysis will be performed early in the design phase. All construction and service contracts are required to comply with AFI 32-7086, Hazardous Materials Management. Ensure all recyclable material (concrete, etc.) is recycled and report recycled quantities by weight to 45 CES/CEVC, Mr. Wayne Neville.

If Facilities 1327, 1330 and "A" and "B" Wings of 989 will be demolished, real property items found on/within should be assessed and offered for reutilization within the Department of Defense (DoD). Excess property that is not reutilized, transferred or donated may be sold to the public as surplus. As part of Pollution Prevention measures, all options should be pursued with base DRMO as alternatives to solid waste disposal.

Air Installation Compatible Use Zone/Land Use- The proposed site is not in conflict with the Airfield Clear Zone, however the height of the facility may need to be reviewed for compliance with the 7:1 height criteria for the airfield. Land use is deemed compatible as the proposed site of a new facility has been incorporated into the PAFB General Plan.

Air Quality- PAFB is located in an area that is in attainment for all criteria air pollutants; therefore, a conformity determination is not required.

Projects involving installation of new air emission sources (boilers, paint spray booths, etc.) will be coordinated through CEVC (494-9261) for permit determination. FDEP requires an air permit to be in place prior to the initiation of construction.

Small welding and soldering operations were normally exempt from air permitting requirements. However, new Title V requirements require the Air Force to track and quantify air emissions from previously unpermitted sources. New welding and soldering operations and changes in operations will be coordinated with the 45 CES/CEV office at 494-7288. Please submit estimates of hourly and annual use of materials and a short process description.

New refrigerant units will use non-Class I ODC substances such as R22, R123, R134a, or ammonia as the refrigerant. R-11 or R-12 units are not to be purchased (Engineering Technical Letter 91-7, CFC Limitation in HVAC Systems).

SXHT 05-3001, Construct AFTAC, PAFB, FL.

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18. Remarks

Water Resources- New Environmental Resources, Potable Water and Domestic Wastewater Permits will be required. Contact 45 CES/CEV at 494-9387 for guidance.

Coverage under an FDEP Construction General Permit will be sought by the operator of a construction activity that: Will disturb one acre or greater, or

Will disturb less than one acre but is part of a larger common plan of development or sale whose total land disturbing activities total 1 acre or greater (or is designated by the NPDES permitting authority);AND

Will discharge storm water runoff from the construction site into a municipal separate storm water sewer system (MS4) or waters of the United States.

If the above criteria apply, A Notice of Intent for Storm Water Discharges Associated with Construction Activity under a NPDES General Permit will be submitted to FDEP, through the 45 CES/CEV office. When all construction activities have been completed, a Notice of Termination will be submitted to FDEP through the CEV office.

An existing open drainage ditch runs parallel to the proposed AFTAC site, contact 45 CEV office (494-9387) to determine permitting requirements if the ditch will be culverted or an overpass developed. Silt curtains/booms may be required to prevent water quality issues downstream.

Prior to and during construction, implement all erosion and sediment control measures (Best Management Practices) required to retain sediment on-site and to prevent violations of state water quality standards. Implement best management practices as necessary and correct any erosion or shoaling causing adverse impacts to water resources.

Dewatering activities associated with this project/action may require a Consumptive Use Permit per Florida Administrative code Chapter 40C-2. Consumptive Use Permit regulations have many thresholds, but the three situations that most frequently require permits are:

- The project proposes to withdraw water from a well that measures six inches or more in diameter.
- The project will use or wants to use an annual average of 100,000 gallons of water or more per day.
- The project has the capacity to pump one million gallons of water or more per day.
- Effluent from dewatering will be discharged to an upland area. Do not discharge to surface waters.

Water and site carrying capacity studies should occur to assess the need for new lift stations and ensure proper site and water resource management.

Safety/Health- Survey records for Facilities 1327 and 1330 indicate ceiling tiles in Fac 1327 have asbestos containing materials (ACM). ACM surveys for 989 indicate various 9"x 9" and 12"x 12" floor tile/mastic, base molding/mastic, and carpet mastic contain ACM. If other materials are suspect, testing will occur for disposal characterization. A pre-demolition ACM survey will be completed and ACM will be abated before demolition. Project designs for demolition of all facilities constructed prior to 1981 will fully address the National Emission Standards for Hazardous Air Pollutants (NESHAP) requirements for asbestos (40 CFR 61 Subpart M). Complete survey records are available in Facility 534, 2nd floor, 45 CEV. Contact CEVC at 494-9272 for guidance.

Heavy metal paint records do not exist for Facilities 989, 1327 and 1330. Due to the age of these facilities, heavy metal paints may be suspect. Testing should occur for disposal characterization. Activities involving painting and/or paint removal will be performed in accordance with FDEP, EPA, OSHA, and HUD requirements for heavy metal and particulate matter emissions and heavy metal paint debris disposal. Materials/coatings containing heavy metals should be left in place if possible and not disturbed. Paint removal and disposal of hazardous paint debris will be in accordance with 45 SW OPLAN 19-14 and the Resource Conservation and Recovery Act (RCRA). Large sized pieces of Construction and Demolition debris with intact heavy metal paints shall be stored in covered containers until ready for disposal in a Class I or III landfill or a C&D disposal facility. The contractor will be responsible for sampling other generated waste stream (rinse water, chips, etc.) to determine if it is hazardous. Results of laboratory analyses will be made available to the AF.

If laboratory processes may be accomplished within a new facility, they will be evaluated for safety and occupational health compliance; likewise, chemical use and waste will be characterized for handling and disposal requirements.

SXHT 05-3001, Construct AFTAC, PAFB, FL.

AF Form 813, page 4

Remarks

Hazardous Materials and Waste- Solid waste will be managed in accordance with the instructions set forth in the specifications of the contract. The contractor will be responsible for sampling all wastes to determine whether they are hazardous or non-hazardous. Results of laboratory analyses will be provided to the Contracting Officer. All containers utilized for the management of wastes will be new and meet the Department of Transportation's performance-oriented packaging requirements. All containers will be labeled to accurately reflect the contents. Refer to OPLAN 19-14 for guidance. The contractor will assume all liabilities for improper waste disposal. All AF hazardous waste is to remain on base and will be shipped off-site by the Air Force under an EPA identification number. Management of hazardous waste will be in accordance with 40 CFR 260-279. Locations of accumulation sites shall be approved by CEVC prior to generating hazardous waste (494-2899). Off-site disposal of solid non-hazardous waste lies with the contractor.

Hazardous material (HAZMAT) authorization will be in accordance with AFI 32-7086, Hazardous Materials Management. Contractors shall submit a HAZMAT Authorization Work Sheet, with the required supporting documentation, including a manufacturer specific Material Safety Data Sheet (MSDS) and estimated quantities for the work as required.

Bioenvironmental waste will be coordinated with 45 ADOS/SGGB (Bioenvironmental office). Contact 494-5435 for guidance and disposal requirements.

Liquid PCBs may be present in electrical equipment such as large high and low voltage switches, capacitors, hydraulic systems, or compressors. If equipment of this nature exists, it should be sampled for PCBs prior to disposal. All electrical equipment containing dielectric fluid will have fluids sampled within six months of disposal. All items that contain PCB levels greater than or equal to 50 ppm will be handled in accordance with 40 CFR 761 and 45SW OPLAN 19-16. This equipment will be turned into the Air Force.

Prior to 1983, PCBs were used in non-liquid applications such as caulk, sealants, paints, etc. If through documentation or prior knowledge, the planner has reason to believe that such materials are present in the facilities to be demolished, contact the 45 CES/CEV office at 494-9268 for guidance.

Venting of ODCs into the atmosphere is prohibited. ODCs will be recovered and recycled prior to excising ODC containing equipment. ODC recovery operations will be performed by trained technicians using EPA approved recovery equipment. Excised ODC equipment will be disposed of properly.

Biological Resources- The new site for AFTAC is not located in the 100-year floodplain according to FEMA maps.

The new site is located in an open grassed area that is presently void of any concerns for impacts to wildlife or native flora. A biological site survey should occur approximately 1 month prior to construction to validate lack of impacts.

The proposed action has the potential to impact threatened and endangered species; therefore, in accordance with Section 7 of the Endangered Species Act, consultation with the U. S. Fish and Wildlife Service (USFWS) will be completed by the Air Force prior to initiation of construction. A light management plan (LMP) in conjunction with the lighting design would need to be reviewed and approved by 45 CEV and USFWS before construction would be acceptable per the Endangered Species Act and Biological Opinion (May 2000). Conducting the project outside of dark hours during the sea turtle nesting season (1 May – 31 October) to include no utilization of exterior construction lighting from dawn to dusk would be required also. Likewise, to reduce adverse impacts to threatened and endangered sea turtles from artificial lighting, all exterior lighting proposed for this project will be in accordance with the 45th SWI 32-7001, Exterior Lighting Management, dated 1 April 03. Bollard, shoebox and downward-directed lighting will be required in the lighting design. All lighting will be shielded from direct visibility of the beach to include interior lighting producing exterior glow.

The drainage ditch that runs parallel to the proposed AFTAC site is not classified as "jurisdictional waters of the US" and is not a wetland, however State coordination will be required for permit determination if the ditch will be reconfigured for stormwater management or culverted.

Any exotic, invasive vegetation encountered (such as Brazilian pepper or Australian pine) will be removed and properly treated on site. New landscaping/shade trees/groundcover will comply with Executive Order 13112, Invasive Species, such that native plants are used as much as practical and no invasive plants are purchased. Landscaping plans should incorporate native plants that are drought tolerant to minimize or eliminate irrigation and high-cost maintenance requirements. Contact CEVP (494-5286) for guidance on native plants.

SXHT 05-3001, Construct AFTAC, PAFB, FL.

AF Form 813, page 5

18. Remarks

Biological Resources- (cont'd)- The provisions of the Coastal Zone Management Act (CZMA) will be followed to include a Federal Consistency Determination. It is a requirement that Federal activities be consistent with the enforceable policies of Florida's federally approved Coastal Management Program. The requirements for such determinations can be found in 15 CFR section 930. A consistency determination states the federal agency's proposed activities' effect on coastal use or resources. Activities will be undertaken in a manner consistent to the "maximum practicable" with the enforceable policies of the approved management program of the state. The consistency determination can be discussed in the EA for the Project (within the Finding of No Significant Impact).

Least terns/black skimmers have been known to nest on roofs at PAFB. If birds are observed on or flying around the facility proposed for demolition, the 45 CES/CEV office will be notified at 494-5286 to address impacts to this species.

If Force Protection requirements limit development at the site of 989 if wings are demolished, then plans should be devised to convert this to "green space" with planted native vegetation and limited turf to provide wildlife habitat and reduce mowing maintenance requirements (AFI 32-7064).

Cultural Resources- Facilities 1327 and 1330 are potentially eligible for listing in the National Register of Historic Places as World War II inert storage assets. Facility 989 is potentially eligible for listing as a Cold War asset. Prior to any expenditure of funds for the proposed action, Section 106 consultation will be required, in accordance with the National Historic Preservation Act. Consultation action will be initiated through 45 CES/CEV. Funding may be required by the proponent to complete HABS (Historic American Buildings Survey) documentation used to record the historical integrity of the facilities as mitigation for demolition.

Geology and Soils

If Facility 989 may be demolished then coordination with the Installation Restoration Program (IRP) will be required to address former contamination sites near the "A" Wing of 989.

Storage Tanks- Information on size and planned contents of any proposed aboveground and/or underground storage tanks will be submitted to the 45 CEV storage tank manager (494-9362). Regulated fuel storage tanks will be constructed IAW FAC 62-761 and will be inspected and approved by FDEP before filling with fuel. Records on contents, either loaded into each tank or dispensed from each tank, will be kept by the Fuels Management and Bulk Storage Operations group in accordance with AFI 23-201 and AFI 23-110. This information, required for all tanks (including fuel, chemical storage, hazardous waste storage, and pressurized), is a requisite for calculating total air emissions from Air Force storage tanks (i.e., "through put" and "loading or unloading" emissions).

Socioeconomics-This beddown action will result in an increased base population (and the surrounding area) with a projected increase of 100-150 new employees in a five-year span. This increase over several years is not likely to cause any significant changes to the economics of the base or the local community because of the large influx of new residents to the area presently occurring and projected in the future.

Traffic/Congestion- It is unclear how an increase in personnel at one area of the base will affect traffic/congestion issues. Factors that may alleviate issues would be personnel having flexible hours and modifications to South Patrick Drive and the gates improving traffic flow over the years.

Work Clearance- An approved Air Force Form 103 (Work Clearance) is required prior to initiation of any site work/excavation.

Demolition, defined as removal of any load bearing structure, requires prior (10 days in advance) FDEP notification regardless of whether the facility contains ACM (Asbestos Containing Materials) or not. A copy of the notification will be provided to 45 CES/CEVC who will coordinate with the project manager before work on the project can begin.

The proposed project does not qualify for a CATEX, as defined in 32 CFR 989, Appendix B. An Environmental Assessment is required.

SXHT 05-3001

ADDENDUM TO AF FORM 813

Page 1/3

7 July 2006, 9 July 2008

The project is being re-evaluated under this addendum due to alternative siting proposals and laboratory construction inclusion into the MILCON. An alternative site in Central Housing is being proposed with demolition of approximately 129 excess units. A laboratory building, approximately 4,181 square meters, is being proposed adjacent to the primary headquarters facility. Additions will be made to the environmental documentation. No Categorical Exclusion applies for this MILCON and an Environmental Assessment is required.

5. Description of Proposed Action and Alternatives (cont'd)

Alternatives

Construction of the AFTAC in Central Housing- This alternative siting has been the preference of the 45 SW/CC to allow development/new missions near the airfield in the original location preferred by AFTAC north of Hangars 985 and 986. The Central Housing siting, similar to the Hangar siting, is out of wetlands, floodplains and prime habitat for native flora and fauna, however it is closer to SRA1A. In preliminary analysis, Force Protection guidelines with setback requirements appear to be able to be met adequately. Approximately 129 housing units in Central Housing will need to be demolished for adequate space for new AFTAC facilities. This Central Housing siting will place the AFTAC just to the north of the new Child Development Center and just to the south of the Truck Inspection gate. This alternative is not preferred by AFTAC but is a viable option if there are no Force Protection or safety issues.

18. Remarks (Addendum- All REMARKS on original 813 dated 7 Jul 06 still apply)

Green Procurement

In addition to any LEED certifications, the Contractor and all Subcontractors involved in this project will comply with Air Force Green Purchasing Program (GPP) requirements. GPP is the purchase of environmentally friendly products and services (e.g., products made from recycled or recovered materials). Federal agencies, their contractors and subcontractors are required, whenever practicable, to maximize the purchase of GPP products and services specifically products made from recovered or recycled materials and Energy Star or Federal Energy Management Program-designated energy efficient products (Executive Orders 13101, 13134, 13221, 13148, RCRA 6002, EPACT 2005 and the Farm Security and Rural Investment Act of 2002). Products made from recovered or recycled materials can be found at the USEPA Comprehensive Procurement Guide (CPG) web site at <http://ofee.gov/gp/gp.asp>. The CPG lists "EPA Designated Guideline Items" containing minimum recycled or recovered materials content according to RCRA 6002 and Executive Order 13101 (<http://www.ofee.gov/>). Prior to project closeout, the design engineer and the contractor will provide a completed copy of the Recovered Materials Determination Form (RMDF) to document purchases of designated guideline items or will provide a justification as to why designated guideline items were not utilized. The RMDF form will be placed into the contract file at contract close-out. GPP requirements will also take consideration of life cycle costing, i.e., the cost of a product, including capital, installation, operating, maintenance, and disposal costs over the lifetime of that product.

Energy Conservation

Federal agencies are required to reduce energy consumption by 2% each year under the Energy Policy Act (Public Law 109-58, Aug 8, 2005). Projects will incorporate energy efficient appliances and products identified under the Energy Star labeling or designated under the Federal Energy Management Program (FEMP) of the Department of Energy as being among the highest 25 percent of equivalent products for energy efficiency unless it is not cost-effective over the life of the product taking energy cost savings into account or there are no products that meet the functional requirements of the agency.

Per the National Energy Conservation Policy Act, sustainable design principles and life-cycle cost-effective technologies will be applied to siting, design, and construction of all new and replacement buildings.

Executive Order 13423, Strengthening Federal Environmental, Energy, and Transportation Management, requires improved energy efficiency and reduced greenhouse gas emission through an annual 3% reduction in energy consumption, and an annual 2% reduction in water consumption.

SXHT 05-3001

Addendum to AF Form 813

Page 2/3

#### Water Resources

Environmental Resource, Potable Water and Domestic Wastewater, and an FDEP Construction General (NPDES) Permits will be required for this project. If dewatering activities become necessary, a consumptive use permit may be necessary. Contact 45 CEV for guidance at 494-9270.

A determination will be made for responsibilities for any permitting requirements if Central Housing becomes privatized and the 45th Space Wing inserts language into the lease for the developer for demolition of units. Additionally, responsibilities for infrastructure upgrades and replacements that may be necessary will be drawn out to aid in cost determinations for both the proposed AFTAC construction and the privatization plan.

#### Safety and Health

Laboratory processes, storage and handling will be coordinated with 45th Space Wing units of Bioenvironmental (494-5435), Wing Safety (494-2202), Medical (494-8890), and Environmental Hazardous Material Management (494-2899) to ensure all guidelines for occupational health, safety, bio-hazardous and hazardous materials are followed.

Safety and Security evaluations will occur for proposed alternate siting in Central Housing with proposed location in close vicinity to the Truck Inspection gate and Child Development Center before final site plan approvals. In addition to Security and Ground Safety, Flight Safety will also need to evaluate designs for the preferred site closer to the airfield to ensure height and clear zone criteria are met before final site plan approvals.

#### Construction Material and Waste

With all demolition activities proposed along with this AFTAC MILCON, ensure all recyclable material (concrete, etc.) is recycled and quantities by weight reported to 45 CES/CEV at 494-9268.

The disposal of fluorescent lamps, high intensity discharge (HID) lamps, and low-pressure sodium lamps will be in accordance AF OPLAN 19-14. Fluorescent and HID lamps shall be managed as universal waste.

All electrical equipment containing dielectric fluid will have fluids sampled within six months of disposal. All items that contain PCB levels greater than or equal to 50 ppm will be handled in accordance with 40 CFR 761 and 45SW OPLAN 19-16. This equipment will be turned into the Air Force. Liquid PCBs may be present in electrical equipment such as large high and low voltage switches, capacitors, hydraulic systems, or compressors. If equipment of this nature exists, it should be sampled for PCBs prior to disposal.

Venting of Ozone Depleting Chemicals (ODCs) into the atmosphere is prohibited. ODCs will be recovered and recycled prior to excising ODC containing equipment. ODC recovery operations will be performed by trained technicians using EPA approved recovery equipment. Excised ODC equipment will be properly disposed of. New units will use non-Class I ODC substances such as R22, R123, R134a, or ammonia as the refrigerant. New units utilizing R-11 or R-12 are not to be purchased (Engineering Technical Letter 91-7, CFC Limitation in HVAC Systems).

#### Biological Resources

The proposed site in Central Housing does not support protected flora or fauna or wetlands and is not in the 100-year floodplain. However, if changes to SRA1A are going to occur for this project with this site then SRA1A is in the 100-year floodplain and a Finding of No Practicable Alternative (FONPA) will be included in the Environmental Assessment to document why there are no practicable alternatives for changes within the floodplain.

To reduce adverse impacts to threatened and endangered sea turtles from artificial lighting operated on 45th Space Wing property, all exterior lighting proposed for this project will be in accordance with the 45th Space Wing Instruction 32-7001, Exterior Lighting Management, dated 25 Jan 2008. Lighting should be on switches with programmable timers. Photocells are to be used only in areas requiring 24-hour security/safety lighting. Lighting designs and a final Light Management design will need to be received by 45 CEV (494-5286) for approval by USFWS prior to purchase of lighting fixtures.

SXHT 05-3001

Addendum to AF Form 813

Page 3/3

Hazardous Material Purchasing/Management

Hazardous material (HAZMAT) management will be in accordance with AFI 32-7086, Hazardous Materials Management. Contractors shall submit a HAZMAT Authorization Work Sheet (AF Form 3952) to the Contracting Officer and Contract POC, with the required supporting documentation, including a manufacturer specific Material Safety Data Sheet (MSDS) and estimated quantities for the work prior to the start of work as required. All HAZMAT to be used in this contract will be approved through the electronic AF HAZMAT authorization/tracking system prior to being transported onto the base. Additional requirements may apply; contact the 45 CES Environmental office at 494-2899 for guidance.

If a hazardous material storage and handling facility is being developed in support of the laboratory, contact the 45 SW Hazardous Waste Manager at 494-2899 to discuss all requirements for proper storage and handling per 40 CFR 260-279 and OPLAN 19-14.

Lease Terms for Privatization of Housing

Lease terms will be clear in demolition and waste management responsibilities for the potential 129 units that will be demolished for the AFTAC site. All environmental requirements will be met regardless of who will actually be accomplishing demolition.

Work Clearance

An AF Form 103 (Work Clearance) is required prior to initiation of any site work/excavation.

Demolition, defined as removal of any load bearing structure, requires prior (10 days in advance) FDEP notification regardless of whether the facility contains ACM (Asbestos Containing Materials) or not. Contact CEVC at 494-9272 prior to the 10 days to coordinate State notification.

CATEX

No Categorical Exclusion (CATEX) applies.

**APPENDIX B**

**CONSULTATION WITH**

**U.S. FISH AND WILDLIFE SERVICE**



**From:** AnnMarie\_Lauritsen@fws.gov  
**Sent:** Friday, October 23, 2009 5:52 AM  
**To:** Dattilo-Bain, Keitha Civ USAF AFSPC 45 CES/CEAO  
**Subject:** RE: Informal consultation for Draft EA for Construction of AFTAC-hard copy to follow

Brigadier General Edward L. Bolton Jr.  
Commander, 45th Space Wing  
1224 Edward H. White II Street, MS-7100 Patrick AFB, Florida 32925-3299  
(ATTN: Keitha Dattilo-Bain)

Dear General Bolton:

Reference is made to your letter dated October 15, 2009, requesting informal section 7 consultation on the proposed construction of the Air Force Technical Application Center (AFTAC) administrative and laboratory facilities at Patrick Air Force Base (PAFB) in Brevard County, Florida. The U.S. Fish and Wildlife Service (Service) has reviewed your request and provides the following comments in accordance with section 7 of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 et seq.).

We reviewed this project to determine the potential effects on nesting and hatchling loggerhead (*Caretta caretta*), green (*Chelonia mydas*), hawksbill (*Eretmochelys imbricata*), Kemp's ridley (*Lepidochelys kempii*), and leatherback (*Dermochelys coriacea*) sea turtles.

The proposed construction site is approximately 1300 feet west of the PAFB beachfront. The large administrative facility is proposed to be 3-4 stories. The Air Force proposes the following measures to minimize impacts to nesting and hatching sea turtles:

All lighting proposed for the AFTAC facilities will be in compliance with light management requirements set in the most recent Biological Opinion (FWS Log:41910-2009-F-0087);

All lighting proposed for the AFTAC facilities will be in compliance with the internal policy 45 Space Wing Instruction 32-7001;

Lighting designs will be reviewed by 45 Space Wing (SW) Environmental to ensure fixture selections, placement, and lumen levels will prevent visibility of artificial lighting on the beach and minimize glow;

Tinting of windows and interior blinds/shades will be incorporated into the design to reduce interior glow visible to the exterior of the facilities; and

A Light Management Plan (LMP) will be developed during the late design phase and provided to the Service's office for review and approval; the LMP will be a guide for facility managers for lighting compliance.

The Service recommends the LMP for the facilities be reviewed by the Service prior to any commitment of funding or contractual obligations to ensure that no irreversible or irretrievable commitment of resources forecloses on the formulation or implementation of any reasonable and prudent measures that would minimize impacts (section 7(d) of the Act). We believe the artificial lighting from this project can be minimized so as to reduce the 'take' to insignificant or discountable for sea turtles. Under this circumstance, it is our view that the proposed project may affect, but is not likely to adversely affect nesting and hatching sea turtles.

Although this does not represent a Biological Opinion for nesting and hatchling sea turtles as described in section 7 of the Act, it does fulfill the requirements of the Act. If modifications are made in the project or additional information becomes available on listed species, reinitiation of consultation may be required.

The Service appreciates the cooperation of PAFB. For further coordination please contact Ann Marie Lauritsen at (904) 525-0661.

Ann Marie Lauritsen, Wildlife Biologist  
U.S. Fish and Wildlife Service  
600 Fourth Street South  
St. Petersburg, Florida 33701  
904/525-0661  
[www.fws.gov/northflorida](http://www.fws.gov/northflorida)

**APPENDIX C**

**CONSULTATION WITH**

**FLORIDA STATE HISTORIC PRESERVATION OFFICE**



FLORIDA DEPARTMENT OF STATE  
**Kurt S. Browning**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

Ms. Robin L. Sutherland  
45 CES/CEVP  
1224 Jupiter Street, MS-9125  
Patrick Air Force Base, Florida 32925-3343

June 25, 2007

RE: DHR Project File No: 2007-4334/Received by DHR: May 21, 2006  
Determination of No Effect for the Proposed Alterations to the North Side of the Air Force  
Technical Applications Building (8BR2136)  
Patrick Air Force Base, Brevard County

Dear Ms. Sutherland:

This office received and reviewed the above referenced submittal in order to identify historic properties listed, or eligible for listing, in the *National Register of Historic Places*, or otherwise of historical, architectural or archeological value that could be affected. We conducted our review in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and *36 C.F.R., Part 800: Protection of Historic Properties*. The State Historic Preservation Officer is to advise and assist federal agencies and applicants when identifying historic properties, assessing effects to historic properties, and considering alternatives to avoid or minimize adverse effects to such properties.

We note and appreciate your staff's diligent documentation for the above referenced building, designated as 8BR2136 in the Florida Master Site File. Based on the information provided, this office concurs that the Air Force Technical Applications Building does not meet the criteria to be eligible for listing on the *National Register*. Therefore, the proposed undertaking will not affect historic properties.

If you have any questions, please contact James Toner, Historic Sites Specialist, by electronic mail at [jetoner@dos.state.fl.us](mailto:jetoner@dos.state.fl.us), or at 850-245-6333. Thank you for helping us to preserve Florida's historic properties.

Sincerely,

Frederick P. Gaske, Director, and  
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office  
(850) 245-6300 • FAX: 245-6436

☐ Archaeological Research  
(850) 245-6444 • FAX: 245-6452

☒ Historic Preservation  
(850) 245-6333 • FAX: 245-6437

☐ Historical Museums  
(850) 245-6400 • FAX: 245-6433

☐ Southeast Regional Office  
(561) 416-2115 • FAX: 416-2149

☐ Northeast Regional Office  
(904) 825-5045 • FAX: 825-5044

☐ Central Florida Regional Office  
(813) 272-3843 • FAX: 272-2340



FLORIDA DEPARTMENT OF STATE  
**Kurt S. Browning**  
Secretary of State  
DIVISION OF HISTORICAL RESOURCES

Ms. Robin L. Sutherland  
45 CES/CEVP  
1224 Jupiter St. MS-9125  
Patrick AFB, Florida 32925-3343

April 09, 2007

Re: DHR Project File No. 2007-01952 / Received by DHR: March 7, 2007  
*Historic Property Survey and Determination of No Adverse Effect for the Inert Storage Facility on Patrick Air Force Base (PAFB), Florida*

Dear Ms. Sutherland:

Our office received and reviewed the above referenced survey report in accordance with Section 106 of the *National Historic Preservation Act of 1966* (Public Law 89-665), as amended in 1992, and 36 C.F.R., Part 800: *Protection of Historic Properties*, and Chapters 267 and 373, *Florida Statutes*, for assessment of possible adverse impact to cultural resources (any prehistoric or historic district, site, building, structure, or object) listed, or eligible for listing, in the *National Register of Historic Places (NRHP)*, or otherwise of historical, architectural or archaeological value.

In February 2007, Thomas E. Penders conducted cultural resource evaluations of for three inert storage buildings on behalf of the Department of the Air Force. It is the opinion of Mr. Penders that structures 8BR2034, 8BR2035, and 8BR2036 are potentially eligible for listing in the *NRHP*.

After careful review of the submitted documentation, it is the opinion of this office that the three inert storage facility buildings are not eligible for listing in the *NRHP*, and therefore the proposed project will have no effect on historic properties listed or eligible for listing in the *NRHP*. Based on the information provided, our office finds the submitted report complete and sufficient in accordance with Chapter 1A-46, *Florida Administrative Code*.

If you have any questions concerning our comments, please contact Scott Sorset, Historic Sites Specialist, by phone at (850) 245-6333, or by electronic mail at [srsorset@dos.state.fl.us](mailto:srsorset@dos.state.fl.us). Your continued interest in protecting Florida's historic properties is appreciated.

Sincerely,

Frederick P. Gaske, Director, and  
State Historic Preservation Officer

500 S. Bronough Street • Tallahassee, FL 32399-0250 • <http://www.flheritage.com>

☐ Director's Office  
(850) 245-6300 • FAX: 245-6436

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☐ Southeast Regional Office  
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☐ Northeast Regional Office  
(904) 825-5045 • FAX: 825-5044

☐ Central Florida Regional Office  
(813) 272-3843 • FAX: 272-2340

## **APPENDIX D**

### **CONSULTATION WITH FLORIDA STATE CLEARINGHOUSE**



# Florida Department of Environmental Protection

Marjory Stoneman Douglas Building  
3900 Commonwealth Boulevard  
Tallahassee, Florida 32399-3000

Charlie Crist  
Governor

Jeff Kottkamp  
Lt. Governor

Michael W. Sole  
Secretary

November 16, 2009

Ms. Keitha Dattilo-Bain  
45 CES/CEAO  
Planning/Conservation  
1224 Jupiter Street, M.S. 9125  
Patrick AFB, FL 32925-3343

RE: Department of the Air Force – Draft Environmental Assessment for  
Construction of the U.S. Air Force Technical Applications Center  
(AFTAC) at Patrick Air Force Base – Brevard County, Florida.  
SAI # FL200911135017C

Dear Ms. Dattilo-Bain:

Florida State Clearinghouse staff has reviewed the Draft Environmental Assessment (EA) under the following authorities: Presidential Executive Order 12372; Section 403.061(40), *Florida Statutes*; the Coastal Zone Management Act, 16 U.S.C. §§ 1451-1464, as amended; and the National Environmental Policy Act, 42 U.S.C. §§ 4321, 4331-4335, 4341-4347, as amended.

As noted in the draft document, the project will require an Environmental Resource Permit from the St. Johns River Water Management District. Please contact Ms. Susan Moor, Supervising Regulatory Scientist, in the Palm Bay Service Center at (321) 676-6626 or [smoor@sjrwmd.com](mailto:smoor@sjrwmd.com) for further assistance and permitting information. An NPDES permit will also be required from the Department's NPDES Stormwater Program in Tallahassee – please call (850) 245-7522 for additional information.

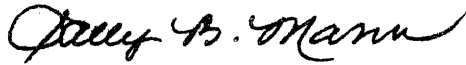
Based on the information contained in the Draft EA, minimal project impacts and comments provided by the Florida Department of State's Division of Historical Resources, the state has determined that, at this stage, the proposed activities are consistent with the Florida Coastal Management Program (FCMP). The regulatory issues identified above must, however, be addressed prior to project implementation. The state's continued concurrence with the project will be based, in part, on the adequate resolution of any issues identified during subsequent permitting reviews. The state's final concurrence of the project's consistency with the FCMP will be

Ms. Keitha Dattilo-Bain  
November 16, 2009  
Page 2 of 2

determined during the environmental permitting stage in accordance with Section 373.428, *Florida Statutes*.

Thank you for the opportunity to review the proposed project. Should you have any questions regarding this letter, please contact Ms. Lauren P. Milligan at (850) 245-2170 or [Lauren.Milligan@dep.state.fl.us](mailto:Lauren.Milligan@dep.state.fl.us).

Yours sincerely,

A handwritten signature in black ink that reads "Sally B. Mann". The signature is written in a cursive, flowing style.

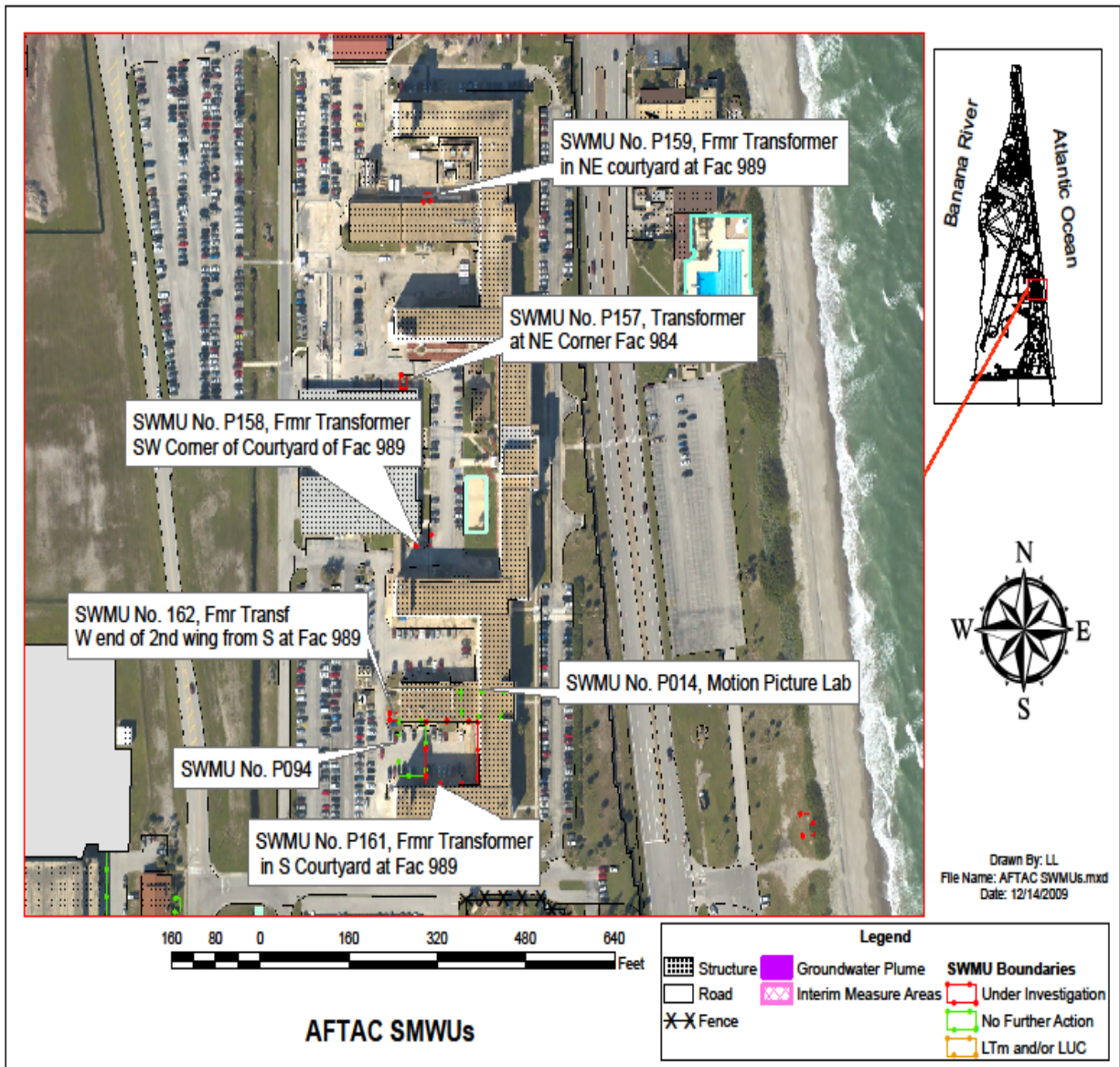
Sally B. Mann, Director  
Office of Intergovernmental Programs

SBM/lm

## **APPENDIX E**

# **SOLID WASTE MANAGEMENT UNIT FACT SHEETS**







UNITED STATES AIR FORCE  
45<sup>TH</sup> SPACE WING



**Fact Sheet For:** MOTION PICTURE LAB, BUILDING 989, SWMU NO. 014  
INSTALLATION RESTORATION PROGRAM-- AREA OF POTENTIAL CONCERN  
PATRICK AIR FORCE BASE, FLORIDA

**Current Status:** NO FURTHER ACTION PLANNED

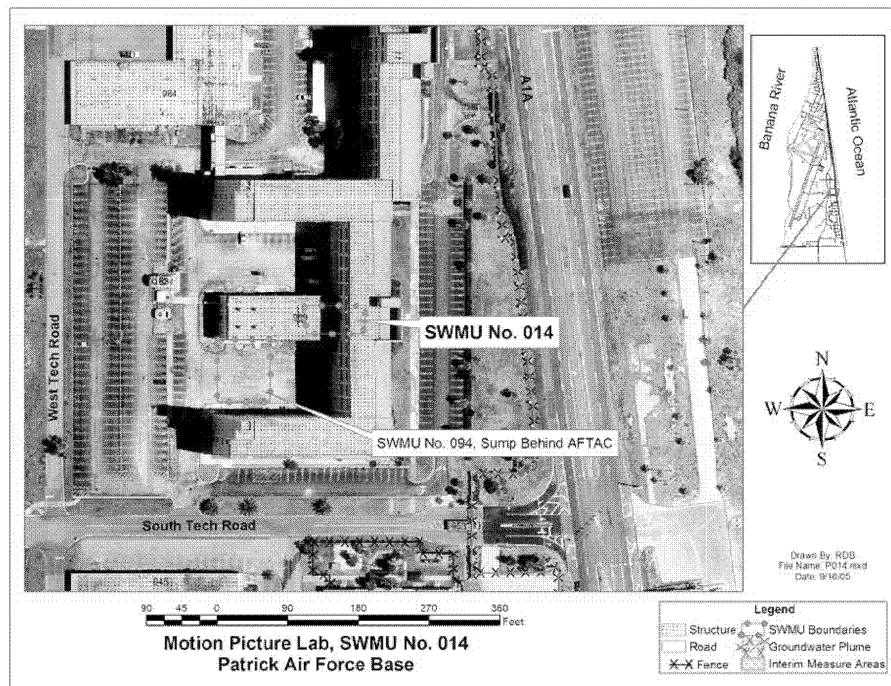
**Site History:** Solid Waste Management Unit (SWMU) No. 014, the motion picture lab, was built in 1958 and remained in service until 1997. The lab was located in Building 989, north of South Tech Road (see site map, below) on Patrick Air Force Base (PAFB). During operation, spent photographic solutions were accumulated for on-site silver recovery and pH control, then discarded to the STP. The recovery process consisted of an apparatus containing an ion exchange column. As the developing solution passed through the column, metals were ionically bonded to the column. The entire column was then sent to a Base facility for contract recovery and no residual material remained. This facility is currently used as office/storage space.

**Environmental Media and Contaminants:**

No sampling was conducted at this site under the Installation Restoration Program.

**Corrective Action Summary:** In accordance with the Resource Conservation and Recovery Act (RCRA), the United States Environmental Protection Agency (EPA) completed a RCRA Facility Assessment (RFA) at this site in 1989. Based on the information gathered during this assessment, there was no evidence of contamination that would adversely affect human health or the environment. The RFA recommended No Further Action (NFA) on this site.

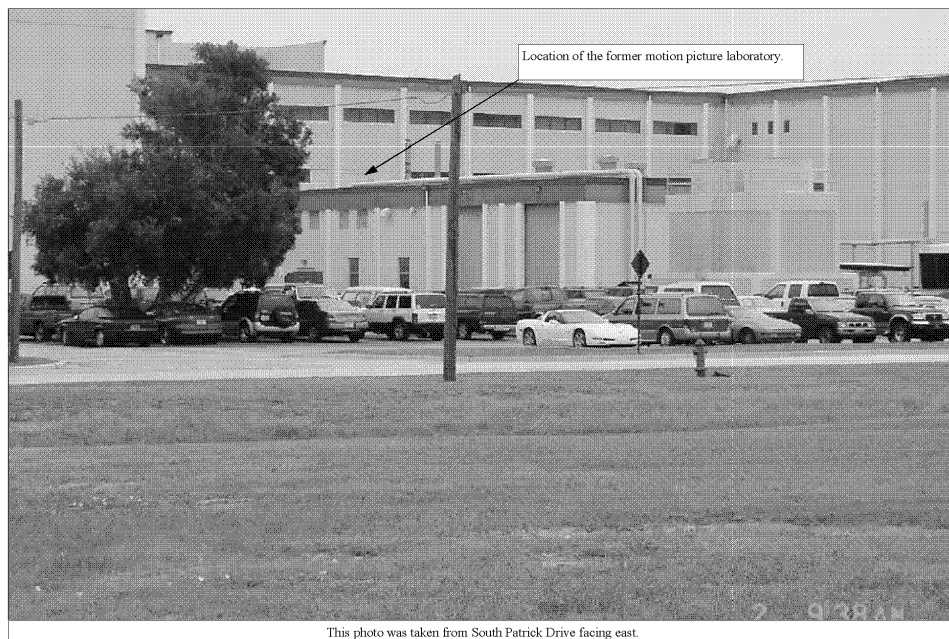
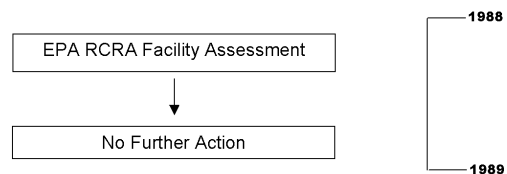
**Future Actions:** The final RFA Report recommended NFA at this site. Both State and Federal regulatory agencies approved this recommendation. Accordingly, no further action is planned at SWMU No. 014.



For further information regarding this site, please contact the 45<sup>th</sup> SW IRP Office at 853-0965.

## IRP Process Flow Chart

**SWMU No. 014 (Motion Picture Lab, PAFB)**



This photo was taken from South Patrick Drive facing east.

For further information regarding this site, please contact the 45<sup>th</sup> SW IRP Office at 853-0965.



**UNITED STATES AIR FORCE**  
**45<sup>TH</sup> SPACE WING**  
**Fact Sheet For: AFTAC SUMP, BUILDING 940, SWMU NO. 094**  
**INSTALLATION RESTORATION PROGRAM—SITE 940**  
**PATRICK AIR FORCE BASE, FLORIDA**



**Current Status:** NO FURTHER ACTION PLANNED

**Site History:** Solid Waste Management Unit (SWMU) No. 094, Facility 940, was built in the late 1960s. Facility 940 (see site map, below) and the sump behind Building 989 were investigated because of historic parts cleaning, sandblasting, and welding that were performed in the area. The sump was reportedly used for acid wastes. The area is of concern because of reports that the sump may have received solvents used in parts cleaning. In addition, there were reports that parts were rinsed with water on the pavement after paint stripping. Building 940 was formerly located in the southeastern portion of Patrick Air Force Base (PAFB) adjacent to Building 989. Building 940 was closed in 1983 and demolished in 1993; the sump is still in place.

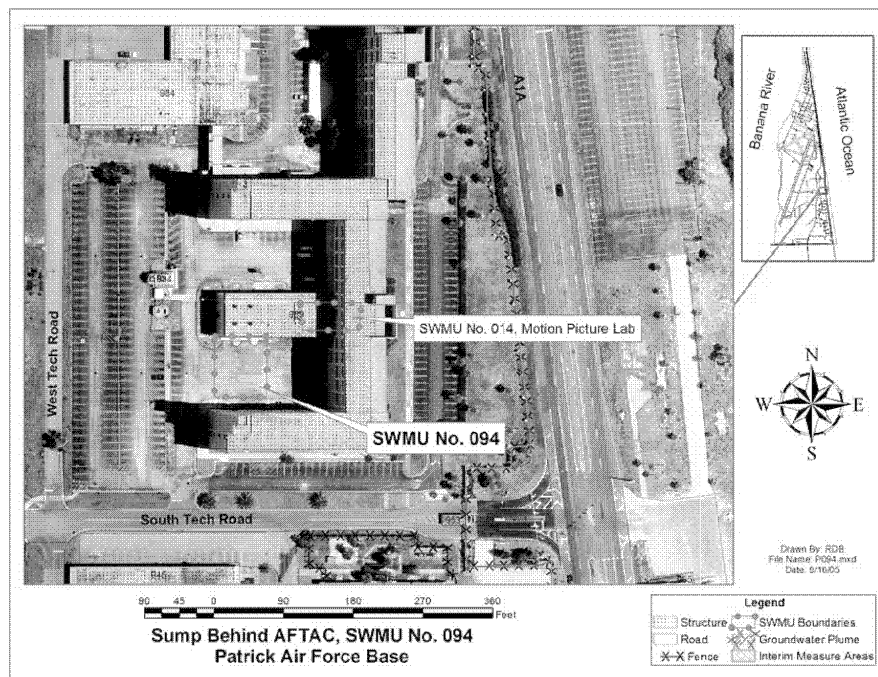
**Environmental Media and Contaminants:**

**Groundwater:** Known contaminants detected in the groundwater include metals. However, these metals were not detected at concentrations that pose a significant risk to human health or the environment.

**Soil:** No known contaminants were detected in the soil above appropriate screening values.

**Corrective Action Summary:** In accordance with the U.S. Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA), a Site Investigation (SI) was performed in 1995. Based on the results of the SI and follow-up investigations at Building 940, the low levels of metals detected in the groundwater do not present a significant risk to human health or the environment. The site was recommended and approved for No Further Action (NFA) by the EPA in January 1996 and Florida Department of Environmental Protection in March 1996.

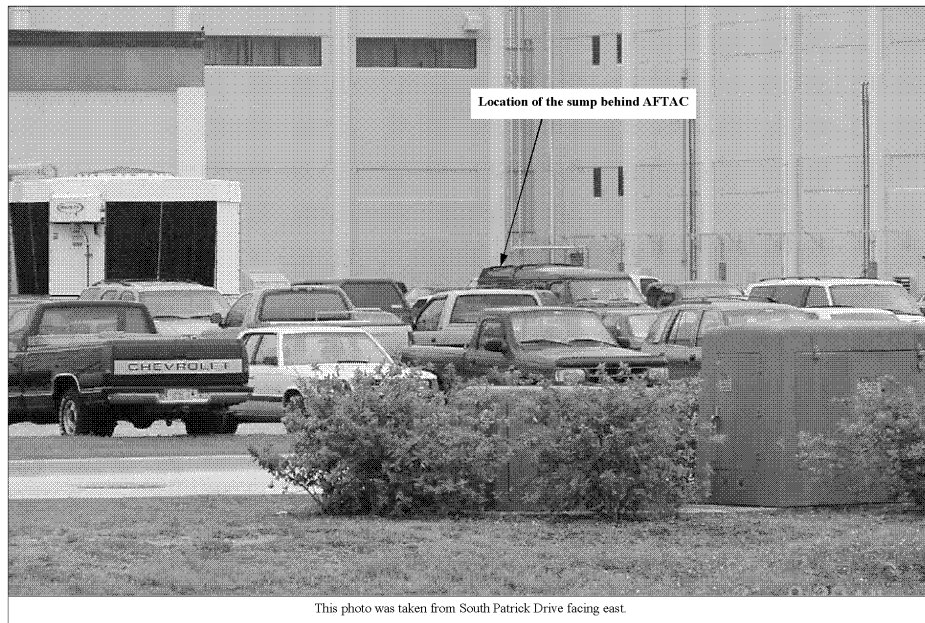
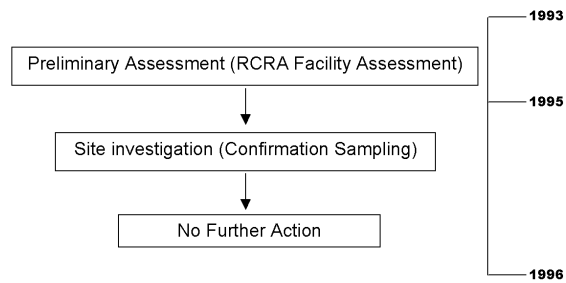
**Future Actions:** Based on the results of the SI, Building 940 was recommended for NFA. This recommendation was approved by both State and Federal regulatory agencies. Accordingly, no further action is planned at the site.



For further information regarding this site, please contact the 45<sup>th</sup> SW IRP Office at 853-0965.

## IRP Process Flow Chart

**SWMU No. 094 (Sump Behind AFTAC, PAFB)**



For further information regarding this site, please contact the 45<sup>th</sup> SW IRP Office at 853-0965.

## **APPENDIX F**

# **AIR FORCE TECHNICAL APPLICATIONS CENTER FACT SHEET**



# FACT SHEET

## U.S. Air Force Fact Sheet

### AIR FORCE TECHNICAL APPLICATIONS CENTER

#### Mission

The Air Force Technical Applications Center provides national authorities quality technical measurements to monitor nuclear treaty compliance and develops advanced proliferation monitoring technologies to preserve our nation's security.

AFTAC operates and maintains a global network of nuclear event detection sensors called the U.S. Atomic Energy Detection System. Once the USAEDS senses a disturbance underground, underwater, in the atmosphere or in space, the event is analyzed for nuclear identification and findings are reported to national command authorities through Headquarters U.S. Air Force.



AFTAC's nuclear event detection mission is directly linked to its nuclear treaty-monitoring mission. AFTAC monitors signatory countries' compliance with the 1963 Limited Test Ban Treaty - this treaty prohibits nuclear testing anywhere but underground and prohibits the venting of nuclear debris or radiation from those tests into the atmosphere outside the country's national borders. AFTAC also monitors the Threshold Test Ban Treaty of 1974 and the Peaceful Nuclear Explosion Treaty of 1976. The 1974 treaty limits the size of underground nuclear tests to 150 kilotons, while the 1976 treaty prohibits the testing of nuclear devices outside of agreed treaty sites.

AFTAC is on the leading edge of technological research and the evaluation of verification technologies for current and future treaties involving weapons of mass destruction that threaten national security.

#### People

AFTAC employs approximately 800 Department of Defense personnel.

#### Organization

AFTAC is a surveillance organization subordinate to the Air Force Intelligence, Surveillance, and Reconnaissance Agency at Lackland AFB, Texas. AFTAC is at Patrick Air Force Base on Florida's east coast, less than 30 miles south of the Kennedy Space Center. There are 10 detachments, seven operating locations and more than 60 unmanned equipment locations around the world that support the long-range detection mission.

#### History

Soon after the end of World War II, Gen. Dwight D. Eisenhower recognized the need to monitor nuclear programs; in 1947 he directed the Army Air Forces to be able to "detect atomic explosions anywhere in the world." In 1949 a sampler aboard an Air Force Office of Atomic Testing B-29 flying between Alaska and Japan detected debris from the first Russian atomic test -- an event the experts had predicted couldn't happen until the mid-1950s. When AFTAC was activated in 1973, it assumed responsibility for the Long-Range Detection Program. This program has evolved into a unique resource that monitors compliance with nuclear treaties.

supports our nation's space programs, and helps protect everyone during emergencies involving nuclear materials. AFTAC systems detected and confirmed nuclear weapon tests by India and Pakistan in 1998. In October 2006 AFTAC's USAEDS detected an event associated with North Korea's claim of a nuclear test and later provided verification to national authorities that the event was nuclear in nature.

**(Current as of June 2007)**

Air Force ISR Agency, Public Affairs Office; 102 Hall Blvd, Ste 234; San Antonio, Texas 78243-7089; DSN 969-2166 or 210-977-2166